



January 7, 2010

Darcy L. Endo-Omoto
Vice President
Government & Community Affairs

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street, First Floor
Kekuanaoa Building
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0273 – Feed-in Tariff (“FIT”) Proceeding
Schedule FIT Tier 1 and Tier 2 Tariff and Agreement

Pursuant to the Commission’s September 25, 2009 Decision and Order (“Decision and Order”), and October 29, 2009 Order Setting Schedule in the above-subject proceeding, Hawaiian Electric Company, Inc. (“Hawaiian Electric”), Hawaii Electric Light Company, Inc. (“HELCO”), and Maui Electric Company, Limited (“MECO”)(collectively the “Hawaiian Electric Companies”), respectfully submit for Commission approval the following proposed documents:

1. Schedule FIT Tariff – Tier 1 and Tier 2 – Oahu
2. Schedule FIT Tariff – Tier 1 and Tier 2 – Hawaii
3. Schedule FIT Tariff – Tier 1 and Tier 2 – Maui
4. Schedule FIT Tariff – Tier 1 and Tier 2 – Molokai
5. Schedule FIT Tariff – Tier 1 and Tier 2 – Lanai
6. Schedule FIT Standard Agreement for Tier 1 and Tier 2

I. Summary

The Commission’s Decision and Order sets forth detailed general principles for the implementation of feed-in-tariffs (“FIT”) in the Hawaiian Electric, HELCO and MECO service territories. This includes but is not limited to discussion of the types and sizes of renewable energy projects that would be eligible to participate in a FIT program, the process for determining the rates to be paid under a FIT program, and the non-rate terms and conditions that should be a part of a utility FIT program. The Commission also directed the Hawaiian Electric Companies to develop reliability standards for each Company to define the circumstances in which FIT projects can or cannot be incorporated, and craft queuing and interconnection procedures that will minimize delays associated with numerous potential FIT projects. Additionally, the Commission requested that the parties to this proceeding “initially

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focus on resolving the issues in Tiers 1 and 2" (Decision and Order at 46) to facilitate the implementation of a FIT program for those tiers.

As discussed more fully below, the Hawaiian Electric Companies' proposed FIT Tariffs comply with each of the Commission's directives as set forth in the Decision and Order. The FIT Tariffs, together with the Schedule FIT Agreement, provide a standardized and streamlined process for the procurement of renewable energy intended to reduce both the risk and cost associated with that process. The FIT Tariffs also support the procurement of renewable energy from "*typical or average*" projects that are "*reasonably cost effective*" as outlined in the Decision and Order (at 62). Accordingly, the FIT Tariffs do not attempt to support every possible project configuration or location or what have been described as "lowest common denominator" projects. Both the FIT Tariffs and Schedule FIT Agreement have been developed to fully comply with the Commission's directive to "*not interconnect projects that will substantially compromise reliability or result in an unreasonable cost to ratepayers or would lead to significant curtailment of new or existing renewable energy generators.*" (Decision and Order at 56).

Finally, the FIT Energy Payment Rates for Tier 1 and Tier 2 reflect both collaborative and interactive technical sessions and settlement communications in the proceeding. The result of these efforts by the parties is the incorporation in the Schedule FIT Tariff of both modified language and pricing proposed by the parties.

II. Procedural Background

On September 25, 2009, Commission issued its Decision and Order adopting general principles for a feed-in tariff for Hawaii. On October 29, 2009, the Commission issued its Order Setting Schedule which established the procedural schedule for the remainder of this proceeding. Pursuant to the Order Setting Schedule, the Hawaiian Electric Companies conducted technical sessions on rate development, queuing and interconnection procedures, and reliability standards on November 18, 19 and 20, respectively. This was followed by an informal exchange of proposed tariffs and contract forms, informal information requests and comments on those documents, culminating in a settlement discussion held on December 17, 2009 and followed by subsequent settlement communications through January 6, 2010 which included the Hawaiian Electric Companies' distribution of the Black & Veatch public model as well as the assumptions that went into the Hawaiian Electric Companies' rate development, to the parties. In parallel with these procedural milestones, the Hawaiian Electric Companies identified and on November 13, 2009 submitted to the Commission a list of qualified candidates for the position of Independent Observer in this proceeding. On November 25, 2009, the Commission approved the list of independent observer candidates and on December 7, 2009, the Hawaiian Electric Companies filed for Commission approval the proposed contract with the Independent Observer.



III. Schedule FIT Tariff¹

The following discusses the provisions of the proposed Schedule FIT Tariff and how the provisions are compliant and consistent with the Commission directives set forth in the Decision and Order.

Eligibility

At pages 31 and 32 of the Decision and Order, the Commission identified photovoltaic ("PV"), onshore wind, in-line hydropower, and concentrated solar power ("CSP") as technologies eligible for a FIT. At page 45 of the Decision and Order, the Commission set forth its determinations on project size tiers for the initial FIT. At page 46 of the Decision and Order, the Commission requested that the parties initially focus on resolving the issues in Tiers 1 and 2 to facilitate the implementation of the FIT program for those tiers. Section B of the Schedule FIT Tariff is compliant with the provisions of the Decision and Order with regard to the identification of eligible Tier 1 and 2 project technologies and sizes.

Section B also includes the following provision:

Except with the written consent of Company, which consent shall not be unreasonably withheld, each physical address (defined as a single residential address or a single tax map key if a commercial or industrial facility) may not have more than one Facility of the same technology type contracted under this Schedule FIT.

The purpose of this provision is to prevent, to the extent possible, a developer from attempting to avail itself of the higher pricing attendant to Tier 1 facilities by developing a number of Tier 1 level projects (thereby taking up the program capacity reserved for that Tier) rather than a Tier 2 project at a particular site. The Hawaiian Electric Companies do not wish, however, to discourage or prevent any eligible renewable facility from participating in the FIT program. Accordingly, the provision allows the utility the opportunity to consent to participation by projects which are eligible but may be inadvertently restricted from participation by this provision.

Section B also contains provisions regarding the eligibility of certain existing facilities to participate in the FIT program including customers currently receiving service under the Companies' Net Energy Metering Program. These provisions are consistent with the

¹ The provisions of the Schedule FIT Tariff are largely identical across islands. The provisions vary primarily due to the different project eligibility criteria applicable to each island pursuant to the Decision and Order.



Commission's determinations on these issues set forth at pages 20-22 of the Decision and Order.

Finally, Section B contains the following provision regarding the sale of electric energy and changes to the Schedule FIT Agreement which are compliant with the directives of the Decision and Order at pages 85-86.

Any Facility selling electric energy to the Company under this Schedule FIT shall sell all the electric energy it produces above any electric energy produced for Seller's own energy consumption, to the Company for the entire term of the Schedule FIT Agreement. A Seller may not sell electric energy to third parties or renegotiate with the Company for any changes to the Schedule FIT Agreement during the term of such Schedule FIT Agreement.

Seller Participation

Section C describes the process for a Seller's participation in the FIT program and how that participation may be managed given that there is not an unlimited capacity on the island systems to take new, variable renewable generation. Section C recognizes and incorporates the role of the Independent Observer and the Commission in determining and approving the Companies' queuing procedures. This section is consistent with the provisions of the Decision and Order at pages 92-93.

Interconnection

At page 68 of the Decision and Order, the Commission directs that the parties "*should use the HECO Companies' Rule 14.H, which was recently revised in Docket No, 2006-0498, for guidance in establishing the interconnection costs and standards.*" Section D of the Schedule FIT Tariff, which expressly requires compliance with the Companies' interconnection standards and procedures provided in Rule 14, Section H, is consistent with the Commission's directive.

Schedule FIT Agreement

Section E of the Schedule FIT Tariff requires that Sellers applying to participate under Schedule FIT complete and sign the standard Schedule FIT agreement appended to the Tariff. This is consistent with the Commission's determination that "*to the extent possible, the utility should provide standard offer contracts with commission-approved FIT rates and mandated terms and conditions*" as set forth at page 87 of the Decision and Order.

Metering

Section F of the Tariff concerns metering and delineates responsibility for the costs of metering between the Company and the Seller. The Section is consistent with the



Commission's determination that the Company should utilize Rule 14, Section H for guidance in establishing interconnection costs and standards, which would include metering.

Purchase of Renewable Energy Delivered by Seller to Company

There are a total of eight rates to be adopted for Oahu corresponding to each of four eligible technologies in two separate tiers.

Additionally, it is important to recognize the important role that tax credits (either the 35% state tax credit or the 24.5% refundable tax credit) can play in the calculation of a rate, particularly for certain technologies such as PV and CSP. The 35% tax credit results in lower costs to ratepayers and therefore the Hawaiian Electric Companies have assumed for each relevant technology full monetization of this tax credit. However, and on an informal basis, other parties to this proceeding have presented project case study information describing the difficulties experienced to date with monetizing the 35% tax credit and indicating that use of the 24.5% refundable credit may be more probable.

As stated by the Commission in its Decision and Order, with respect to State and federal taxes and other incentives, the commission agrees that "adjusting the project development costs for such tax credits, tax policies, rebates or incentives for renewables is consistent with the inclusion of the taxes incurred in the project development cost used in the determination of the FiT rates. (Decision and Order at 63). To the extent that parties in this proceeding are able to provide record support to the Commission for use of the 24.5% refundable credit, including but not limited to identification of Hawaii specific examples of this situation, the Hawaiian Electric Companies would support including a 24.5% refundable credit rate for election by a PV or CSP developer upon an appropriate demonstration that this would be the relevant tax treatment for the project. The development of these two additional rates as well as the other eight proposed rates to be adopted for the Schedule FIT Tariff, and how these rates are compliant with the Commission's direction in the Decision and Order, are discussed in detail below.

Page 2 of the Decision and Order sets forth the fundamental guidance for the development of FIT rates: *"FIT rates will be based on the project cost and reasonable profit of a typical project. The rates will be differentiated by technology or resource, size, and interconnection costs; and will be leveled."* At page 62, the Commission reiterated that *"FIT rates should support a typical or average project" that is reasonably cost-effective,* and that *"included in the calculation of FIT rates should be project and generation cost information, energy production, and the target internal rate of return."* At page 84 of the Decision and Order, the Commission noted that *"the HECO Companies are responsible for developing the initial FIT rates in collaboration with the parties, and may employ independent consultants to assist them as needed in compiling cost of generation data and determining the amount of energy produced by typical projects."* The Hawaiian Electric Companies retained Energy and



Environmental Economics, Inc. ("E3") and Mirenish Consulting to assist in development of the initial FIT rates.

In developing the initial FIT rates E3 and Mirenish were informed by the following additional determinations contained in the Decision and Order: (1) *"FIT rates should vary by technology or resource type, and by project size"* (at 78); (2) the FIT *"will not feature different rates for each island"* instead, *"rates should cover the cost of and provide a reasonable return for typical projects on Oahu, although they will apply to other islands as well"* because *"uniform FIT rates across all islands better encourage developers to locate projects where they are least cost than would location-differentiated rate."* (at 79); and (3) *"[i]n evaluating the justness and reasonableness of proposed FIT rates, the commission will look most favorably on those based on Hawaii-specific cost and performance data, followed by mainland cost and performance data"* (at 84).

Methodology For Determining Rates

E3 began by reviewing the available information on installed Hawaii projects within each technology and tier. To provide a comprehensive data set, E3 also benchmarked mainland cost of generation numbers for all technologies and tiers using public sources, and manufacturer and developer quotes. Mainland benchmarks were adjusted for Hawaii premiums for shipping, labor and land cost.

To develop the rates, E3 utilized a straightforward, public, levelized cost of energy ("LCOE") model developed by Black and Veatch and thoroughly vetted through the California Energy Commission's Renewable Energy Transmission Initiative ("RETI") stakeholder process. That model can be found at <http://www.energy.ca.gov/reti/documents/index.html>. E3 added the following elements to the RETI model to ensure that it appropriately conformed to the Hawaii market. This included accounting for Hawaii State tax credits, insurance, land costs, excise taxes, production degradation and tax rates (marginal federal rate and effective state tax rate) and assuming full monetization of all tax credits and depreciation.

Next, E3 developed project scenarios to get an inclusive range of LCOE estimates by technology and tier. The project scenarios encompass the expected range of low, medium and high LCOE results. The LCOE analysis is sensitive to key project inputs that vary by technology. The analysis also provided an additional sensitivity analysis to inform decision making based on the key factor or factors that drive the LCOE. Accordingly, to the extent that additional, new or different factors are considered, the analysis should be re-evaluated to ensure that specific inputs are not unduly or inappropriately driving a technology or size specific result.

PV Systems



E3 utilized a Lawrence Berkeley National Lab ("LBNL") report (Tracking the Sun II – October 2009) for much of the data inputs and cross-checked the reasonableness of the numbers in the LBNL report against the California Solar Initiative program database and a KEMA cost of generation study, as well as recent reports and analyses on the significant drop in PV module prices in 2009. The inputs were also compared against PV quotes from manufacturers and developers to determine the reasonableness of the overall installed costs, particularly due to the significant drop in PV module prices which occurred in 2009. Operating assumptions were secured from independent engineers (O&M and degradation numbers). Capacity factors were calculated using the National Renewable Energy Lab's (NREL) PVWatts version 1 calculator using Honolulu as the location; they were also cross-checked against real capacity factors from projects in the Hawaiian solar schools program. Insurance data was received from insurance quotes since it is very difficult to get publicly available information on Hawaii-specific numbers. Land costs were secured from a number of sources including REIT PV roof rental program quotations, publicly-announced roof rental projects, Southern California Edison's roof rental program, and cost data from Hawaii, when available. Additionally, a 50% labor premium was added to the labor portion of the Balance of System of the Capital Cost. The labor adjustment is consistent with percentages contained in HECO's IRP-3 from May 2005 and is due to a combination of labor wage and productivity adjustment factors. PV Inverters and panels were kept at the same price but excise tax was added to them.

This produced a range of Capital Cost pricing for projects of various sizes within Tiers 1 and 2. Sensitivity analyses were then performed. For the full range of Tier 1 (0 - 20 kW) and Tier 2 (20 - 500 kW) PV project sizes, the most important sensitivity for determining LCOE is the installed costs of the equipment. As the systems get larger, the costs typically go down.

Because of that, the Hawaiian Electric Companies focused on the higher end of both size ranges (20 kW for Tier 1 and 500 kW for Tier 2) to set the tariff at a rate that will facilitate the development of projects but also take advantage of economies of scale. The Hawaiian Electric Companies re-focused on Capital Costs at 20 kW for Tier 1 and 500 kW for Tier 2; Tier 1 costs were scaled up 10% and down 10% to obtain a range of pricing for 20 kW projects within Tier 1. This scaling was also done to develop a range of pricing for 500 kW projects within Tier 2. The range of Capital Costs came out to \$5.76/watt dc to \$7.04/watt dc for Tier 1 resources and \$5.13 to \$6.31/watt dc for Tier 2 resources.

For Tier 1 projects in the 20 kW category, the LCOE ranged from \$187/MWh on the low end to \$250/MWh on the high end (install prices of \$5.76/watt dc to \$7.04/watt dc). \$218 is the middle of that range and is the proposed FIT rate for Tier 1 PV projects assuming full monetization of a 35% state tax credit.

As discussed above, the tax treatment that applies to a particular project will affect the rate to be paid. Assuming use of the 24.5% refundable tax credit rather than the 35% credit, for Tier 1 projects in the 20 kW category the LCOE ranged from \$235/MWh on the low end to \$312/MWh on the high end (install price of \$5.76/watt dc to \$7.04/watt dc). \$274/MWh is



the middle of the range and is the proposed FIT rate for Tier 1 PV projects assuming the 24.5% refundable state tax credit.

For Tier 2 projects in the 500 kW category, the LCOE ranges from \$161/MWh on the low end to \$216/MWh on the high end (install prices between \$5.13/watt dc and \$6.31/watt dc). \$189/MWh is the midpoint of the range and is the proposed FIT rate for Tier 2 PV projects when fully monetizing the state tax credit at 35%.

Assuming a 24.5% refundable state tax credit, the LCOE for Tier 2 projects in the 500 kW category range from \$203/MWh on the low end to \$273/MWh on the high end (with install prices between \$5.13/watt dc and \$6.31/watt dc). \$238/MWh is the midpoint of this range and is the proposed FIT rate for Tier 2 PV projects when using the refundable state tax credit at 24.5%.

On Shore Wind

The wind benchmarking study was developed using a range of public sources and manufacturer quotes. Capacity factors were derived from NREL's 2008 Mid-Scale Wind Study. The range shown shows the capacity factor for class 4 wind resources and above. In addition, E3 reviewed manufacturer specifications which were within the range for Tier 2 but extended the range for Tier 1. The 10kW Bergey resource defined the high end of the Tier 1 range with a 34% capacity factor. The NREL study reviewed cost of generation reports for turbine prices but determined the most accurate current information was from manufacturer quotes. The Tier 1 range incorporates quotes from 1kW-20kW from Bergey, Southwest, Ventera, Abundant RE, and Aerostar. Tier 2 incorporates quotes from 20kW to 100kW from Jacobs, Aerostar, WindEnergySolutions, and Northern Power.

Development costs, permitting costs, and interconnection costs for Tier 1 were developed from the NREL Bergey study which details the line by line cost of installation of 10kW Bergey turbines at a variety of locations in the pacific northwest. The range developed removes the lowest and highest outlier costs. Development costs, permitting costs and interconnection costs for Tier 2 were taken from quoted installation costs from Northern Power and WindEnergySolutions for their 100kW and 80kW systems respectively. Freight costs assume a shipping cost equal to 5% of turbine cost (which is from the B&V 2005 IRP report) and an excise tax of 4.72%. O&M costs were from the 2009 KEMA Cost of Generation Survey which KEMA developed for the California Energy Commission.

To encourage developers to take advantage of the high quality wind resource Hawaii has available and reduce possible "windfall" profits, the Hawaiian Electric Companies narrowed the range of capacity factors considered to 28-34% (26-32% with losses) for Tier 1 and 30%-42% (28-39% with losses) for Tier 2.



For Tier 1 projects with a capacity factor higher than 26%, which targets better wind sites and more cost effective projects, the LCOE ranged from \$117/MWh on the low end to \$205/MWh on the high end with installed costs between \$5000/kW and \$7000/kW and capacity factors between 26-32% (with losses included). \$161 is the midpoint of the range and is the proposed FIT rate for Tier 1 wind projects.

For Tier 2 projects with a capacity factor higher than 30%, which targets better wind sites and thus more cost effective projects, the LCOE ranged from \$95/MWh on the low end to \$181/MWh on the high end with installed costs between \$5000/kW and \$6500/kW with capacity factors (with losses included) between 28-39%. \$138 is the midpoint of the range and is the proposed FIT rate for Tier 2 wind projects. Full monetization of the 20% state tax credit for wind was assumed.

In-Line Hydro

The benchmark data for in-line hydro was largely taken from the 2006 Micro Hydro Guide – a public cost of generation report – and adjusted for inflation by CPI. In addition, the benchmarking used KEMA's 2009 CEC cost of generation survey to verify cost and performance data.

The capacity factor range came from a 2002 study that was developed for the Hawaii County Water Department. This range was also verified by the KEMA CEC cost of generation survey which had a capacity factor range of 10%-90%. The midpoint of Tier 1 total installed cost is roughly \$4000/kW. The midpoint of Tier 2 total installed cost is roughly \$2000/kW. To incorporate the full range of project costs, E3 also assessed costs on installed in-line hydro units in Hawaii. All three projects identified in the State have additional construction costs which represent an undefined portion of the total cost. Thus, the costs shown should represent a conservative high end. The actual installed projects do not show the clear economies of scale relationship seen in the cost of generation analysis. Other factors seem to drive the installed cost in these three cases – most likely siting/development related costs. The COGS numbers do not seem to fully address this factor. Thus the COGS numbers can be seen as a low end of the installed cost range with low siting/development costs. E3 used the midpoint of the range of installed costs to represent the high end of the range at \$9000/kW for both Tier 1 and Tier 2 as there is no clear size relationship to scale up or down to Tier 1 projects.

The capacity factor of the available resource varies from 10-90%. In order to take advantage and encourage cost-effective projects, the Hawaiian Electric Companies assumed a capacity factor of 50% for their analysis. The definition targets low environmental impact hydro projects. Selecting the middle range of capacity factor focuses the rate on more cost-effective opportunities.



For Tier 1 in-line hydro projects, the LCOE ranges from \$135/MWh on the low end to \$290/MWh on the high end with installed costs between \$4000/kW and \$9000/kW. \$213 is the midpoint of the range and is the proposed FIT rate for Tier 1 in-line hydro projects.

For Tier 2 in-line hydro projects, the LCOE ranges from \$75/MWh on the low end to \$303/MWh on the high end with installed costs between \$2000/kW and \$9000/kW. \$189 is the midpoint of the range and is the proposed FIT rate for Tier 2 in-line hydro projects. Note that in-line hydro does not have any state tax incentives.

Concentrated Solar

E3 performed extensive research for publicly available installed costs for CSP technology within the Tier 1 and Tier 2 size limits. E3 was not able to find any data points within Tier 1 but did find several scaling estimates to move from larger systems to single dish, Concentrating Photovoltaic ("CPV") or trough single unit estimates. The best publicly available numbers were used to develop a range of capacity factors, installed cost and O&M for the project scenario analysis.

The capacity factors ranged from 23% to 28%. Trough systems were quoted at 23-28% while dish was estimated at 23-27% and CPV was estimated at a 23-26% capacity factor. The high end of this range represents Mojave level solar insolation. A Hawaii specific solar study from 1992, showed that for trough the reduction in solar insolation was 25% for Hawaii. A similar CPV study shows capacity factors at 23% in Los Angeles which has a similar insolation profile as Hawaii. Dish systems were assumed to also be at the lowest end of their range due to the solar resource levels in Hawaii. Thus the actual capacity factors modeled were 21% for trough, 23% for dish and 23% for CPV.

The original capacity factor ranges came from two benchmarking reports, one by Black & Veatch for NREL in 2006 and one from Navigant for Arizona's Solar Electric Roadmap in 2007. Direct data points for Tier 1 installed costs were not available. Therefore, the project team used scaling factors published to scale up from Tier 2 costs. In particular, the study used scaling factors from Navigant's Arizona Roadmap report and California Energy Commission estimates for a single dish vs an array for dish technologies. Scaling the 8 unit 92kW system for CPV to a single 12kW system we assumed a scaling factor of 125%. For trough, there are no data points for systems in the Tier 2 size range. Thus, E3 had to scale from MW scale projects down. E3 assumed a scale factor of 175%.

For Tier 2 the benchmarking range is the range of estimates from all available data points for all three technologies. Land costs are from contracts with the State Department of Hawaiian Home Lands and other known contracts. Leased land costs in Hawaii range broadly from \$1000/acre/yr - \$175,000/acre/yr. There seems to be a significant amount of land available at the \$10,000/acre/year price point. For CPV, the land cost is assumed to be a roof rental fee and is the same assumption and space requirements as PV. For CSP, E3 lacked adequate benchmarking ranges to determine the extent of how key pricing components vary by project.



For Tier 1 projects, the LCOE ranged from \$219/MWh on the low end to \$321/MWh on the high end with installed costs between \$8,500/kW and \$10,600/kW. \$269 is the midpoint of the range and is the proposed FIT rate for Tier 1 CSP projects.

For Tier 2 projects, the LCOE ranged from \$182/MWh on the low end to \$326/MWh on the high end with installed costs between \$7,400/kW and \$10,500/kW. \$254 is the midpoint of the range and is the proposed FIT rate for Tier 2 CSP projects.

It may be appropriate for CSP projects to also avail themselves of the 24.5% refundable state tax credit. With this assumption the LCOE for Tier 1 PV projects ranges from \$219/MWh on the low end to \$321/MWh on the high end with installed costs between \$8,500/kW and \$10,600/kW. \$331 is the midpoint of the range and is the proposed FIT rate for Tier 1 CSP projects utilizing the 24.5% refundable tax credit.

For Tier 2 CSP, the LCOE ranges from \$224/MWh on the low end to \$326/MWh on the high end with installed costs between \$7,400/kW and \$10,500/kW. The change in tax rate does not effect the trough system because the trough system's state tax credit is capped at the value for 1 system. \$275 is the midpoint of the range and is the proposed FIT rate for Tier 2 CSP projects utilizing the 24.5% state refundable tax credit.

Additionally, it is important to recognize the financing assumptions that were used to run the scenarios to set the Feed-in Tariff prices. For the cost of equity, an 11% figure (out of a 10-15% range) was used and which represents a slight premium to Hawaiian Electric's approved rate of return. Given Hawaiian Electric's investment-grade status and the fact that there is minimized risk through a Feed-in Tariff structure, some of the risk is removed so a number at the lower end of the range is reasonable. For the debt rate, a 9% figure was used which in the middle of the 8 – 10% range. For debt tenor a 20-year period was used. A 20 year period is reasonable given that the electric energy will be sold through a standardized FIT program and therefore, much of the risk is removed for a lender. Finally, for debt percentage, it was assumed that 35% of the capital structure (among a 30-40% range), was appropriate since there will be a sufficient revenue stream from the project for a project to raise 35% in debt.

Section G(3) of the Schedule FIT Tariff also provides that *"Seller shall receive the FIT energy payment rate in effect at the time of execution of the Schedule FIT Agreement for the entire term of the Schedule FIT Agreement, provided, however, that the FIT energy payment rate may be modified by the Commission during the term of the Agreement if it is determined by the PUC to be necessary to maintain the viability of Seller's development and operation of Facility due to changes in federal or state tax laws."* This recognizes the potential adverse effects of a change in tax incentive policy during the term of the Schedule FIT Agreement on project viability.



Baseline FIT Rate

Section H of the Schedule FIT Tariff provides for a baseline FIT rate for certain Renewable Portfolio Standards ("RPS") eligible technologies which are not otherwise eligible for a specific FIT energy payment rate. The baseline FIT rate will be the lowest specified FIT energy payment rate for any project size or technology on any island and accordingly, will likely have to be developed once the pricing for Tier 3 projects has been developed and subsequently approved by the Commission. Additionally, projects using the baseline FIT Rate cannot exceed the maximum size limits for Schedule FIT projects on the island that the project is proposed. This is consistent with the provision for a baseline FIT rate contained in the Decision and Order at 36.

Term

At page 85 of the Decision and Order, the Commission adopted a FIT contract term of twenty years. Section I of the Schedule FIT Tariff provides for a twenty year Agreement term and is consistent with the Commission's directive.

Allowed Project Development Timeframe, Fees and Deposits

At pages 92-93 of the Commission's Decision and Order the Commission stated that the queuing and interconnection procedures to be developed by the Company in conjunction with the Independent Observer *"should include project development milestones to advance in the queue and deposits for applicants."* According to the Commission, such procedures *should "maintain the incentive for only viable projects to apply for interconnection studies."* (Id.) Moreover, the Commission has directed that *"to deter frivolous projects from filling the caps, a significant application fee should be required."* (Decision and Order at 58)

Consistent with this determination, the Schedule FIT Tariff (at Sections K and L) includes references to a project development timeframe, the payment of an application fee (to deter frivolous applications), reservation fee (to incent project completion), and security deposit(s) (to promote timely development), and the potential forfeiture of certain fees and security deposits to the extent a developer fails to meet the allowed project development timeframe,

While these fees and deposits are specified in the Schedule FIT Tariff, the amounts are not specified in recognition of the Commission's directives that the Independent Observer participate in and oversee administration of the queuing process. Appropriate milestones, fees and deposits will be implemented once developed by the Hawaiian Electric Companies and Independent Observer and approved by the Commission.

Section L of the Schedule FIT Tariff also contains provision for a nominal monthly service charge to be paid for the metering, billing and administration of the Seller's purchased power under the Schedule FIT Agreement. This section is self-explanatory and intended to provide



some compensation to the utility and its ratepayers for the costs associated with administering the Seller's Agreement.

Participation in other Company Programs:

Section M addresses the circumstance where a Seller may have multiple generators on a particular site. To avoid circumstances where a Seller is receiving duplicative compensation, the section requires that multiple generators may not participate in any other Company interruptible or net energy metering programs unless the multiple generators can be segregated electrically from each other.

IV. Schedule FIT Agreement

At page 87, of the Decision and Order, the Commission states that *"to the extent possible, the utility should provide standard offer contracts with commission-approved FIT rates and mandated terms and conditions."* The Commission goes on to state that *"[e]xcept where the commission has dictated specific terms and conditions, the terms and conditions of the standard offer contracts should, to the extent possible, closely match those of existing negotiated PPAs."*

The Schedule FIT Agreement attached to the Schedule FIT Tariff does, to the extent possible, include terms and conditions which match those of existing negotiated PPAs. Where the Schedule FIT Agreement differs, it does so in large part to reflect specific directives in the Commission's Decision and Order, or to simplify terms for a more standardized agreement. The following discusses the specific areas of compliance between the Schedule FIT Agreement and the Decision and Order.

A principal directive in the Company's Decision and Order is the Companies' obligation to ensure system reliability. In particular, the Decision and Order expressly states that *"the HECO Companies maintain the ability and obligation to refuse to interconnect projects that will substantially compromise reliability or result in an unreasonable cost to ratepayers."* (Decision and Order at 44). Consistent with this, the Decision and Order observes that based upon the reliability standards to be developed by the Company *"the utility could determine that projects above certain sizes or using certain technologies are not possible in certain locations without degrading reliability or necessitating costly system upgrades. As discussed below, the utility need not interconnect projects that would likely face significant curtailment or cause significant curtailment for existing renewable energy generators."* (Id.)

Sections 2 (Seller's obligation to comply with the Company's Interconnection Requirements and Distribution Generating Facility Interconnection Standards and Technical Requirements), 5 (Personnel and Company System Safety) and 6 (Continuity of Service) collectively address maintaining the Company's ability to ensure that it can meet the obligation described in the Decision and Order. With regard to Section 6, the order in which any curtailment is



The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
January 7, 2010
Page 14

effectuated is an important consideration. Because this will be particularly relevant to Tier 3 project sizes and will likely be addressed during that phase of the proceeding, the Tier 1 and Tier 2 Schedule FIT Agreement contains a placeholder which can be completed upon any approval by the Commission of an appropriate curtailment order methodology in that phase of the proceeding.

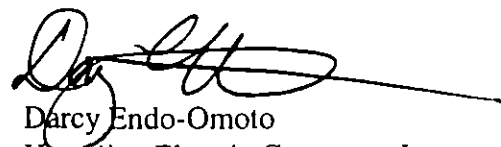
Page 86 of the Decision and Order provides that projects above 20 kW (i.e. Tiers 2 and 3) must provide at least three months advance notice to the utility and the commission prior to ceasing operation for reasons other than f o r c e majeure events or be subject to penalties." Section 10(d) of the Schedule FIT Agreement incorporates this section and proposes a possible liquidated damages provision for the Commission's consideration.

At pages 89 and 90 of the Decision and Order, the Commission adopts certain annual reporting requirements for renewable project developers. Section 20 of the Schedule FIT Agreement (Regulatory Compliance) incorporates the Commission's order into the Agreement.

Finally, at pages 90-91 of the Decision and Order, the Commission provides some direction on the FIT project's responsibility at the conclusion of the FIT term. Specifically, projects must offer to sell their electricity to the utility on an annual basis. Section 9 of the Schedule FIT Agreement addresses this requirement.

The Hawaiian Electric Companies respectfully submit that the foregoing Schedule FIT Tier 1 and Tier 2 Tariffs and Schedule FIT Agreement are reasonable, compliant with the directives set forth in the Commission's Decision and Order and will serve to incent new, renewable energy generation in the Companies' service territories. The Hawaiian Electric Companies therefore respectfully request Commission approval of these documents as the Commission deems appropriate under the circumstances.

Sincerely,



Darcy Endo-Omoto
Hawaiian Electric Company, Inc.
Hawaii Electric Light Company, Inc.
Maui Electric Company, Limited

Attachments



c: Distribution List

**SCHEDULE FIT TARIFF
TIER 1 AND TIER 2**

OAHU

SCHEDULE FIT TIER 1 AND TIER 2
HAWAIIAN ELECTRIC COMPANY, INC. ("COMPANY")

Feed-In Tariff - Purchases from Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities

A. Availability:

This schedule feed-in tariff ("FIT") for Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities ("Schedule FIT") is available to customers, individuals, and independent power producers ("Sellers") who wish to sell to the Company electric energy from a Facility (as defined in Section B, below). This Schedule FIT sets forth the program eligibility, rates, and the terms and conditions for the sale of electric energy to the Company under this Schedule FIT.

B. Eligibility:

An eligible renewable energy generating facility under this Schedule FIT is an electric energy generating facility which meets the following criteria ("Facility"):

- (a) Sells electric energy to the Company; and
- (b)
 - (i) With respect to Tier 1 Facilities, is a new photovoltaic ("PV"), concentrated solar power ("CSP"), on-shore wind, or in-line hydropower system with a Design Capacity (defined as the capacity of the generator in kW as established by the manufacturer that is available for use at the Facility to meet customer load and/or exported to the Company system for sale to Company under the Schedule FIT) up to and including 20 kilowatts (kW) alternating current (AC); and
 - (ii) With respect to Tier 2 Facilities, is a new:
 - (A) PV system with a Design Capacity (AC) greater than 20 kW and up to and including 500 kW; or
 - (B) CSP system with a Design Capacity (AC) greater than 20 kW and up to and including 500 kW; or
 - (C) In-line hydropower or onshore wind system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW.

Except with the written consent of the Company, which consent shall not be unreasonably withheld, each physical address (defined as a single residential address or a single tax map key if a commercial or industrial facility) may not have more than one Facility of the same technology type contracted under this Schedule FIT.

HAWAIIAN ELECTRIC COMPANY, INC.

Transmittal Letter Dated January 7, 2010.

This Schedule FIT shall not apply to an existing generating facility currently selling electric energy to the Company under a purchase power agreement or a Schedule Q contract, or with an existing standard interconnection agreement with the Company ("Existing Projects"). Such Existing Projects shall not be eligible to sell electric energy to the Company under this Schedule FIT.

Notwithstanding the foregoing, customers currently receiving service under the Net Energy Metering Program ("NEM Program") or owners of new generating facilities that are also eligible under the NEM Program will have a one-time option to elect to receive service under the NEM Program or to sell electric energy to the Company under this Schedule FIT. Customers receiving service under the NEM Program cannot sell excess energy production to the Company under this Schedule FIT. If a customer in the NEM Program seeks to install an additional generation facility at the same site as an existing net energy metering system, but wishes to keep such existing net energy metering system under the NEM Program and sell the electric energy from the additional generation facility to the Company under this Schedule FIT, the additional generation facility shall be separately metered, provided that such additional generating facility satisfies the definition of "Facility" under this Schedule.

Any Facility selling electric energy to the Company under this Schedule FIT shall sell all the electric energy it produces above any electric energy produced for Seller's own energy consumption, to the Company for the entire term of the Schedule FIT Agreement (see Section E, below). A Seller may not sell electric energy to third parties or renegotiate with the Company for any changes to the Schedule FIT Agreement during the term of such Schedule FIT Agreement.

C. Seller Participation:

Participation under this Schedule FIT will be available on a prioritized queue basis as determined by the Company with the concurrence of the Independent Observer (the independent third party retained by the Company and approved by the Hawaii Public Utilities Commission ("Commission")) to oversee the initial development and subsequent administration of the Company's queuing and interconnection procedures). Availability of service under this Schedule FIT shall be closed to new Sellers once Schedule FIT Contract Capacity (defined as the sum of all Sellers' contracted Design Capacity) reaches applicable system limits as determined through the Company's reliability standards and other appropriate mechanisms approved by the Commission. Should additional Sellers express interest in this Schedule FIT after the applicable system limits are reached, the Company will maintain a list of interested Sellers, ranked and prioritized in a reserve queue under this Schedule FIT. Sellers on this reserve queue will be allowed to participate under this Schedule FIT according to their rank order when sufficient capacity becomes available, either due to the start of a new subscription period or if other Sellers who have entered into an Agreement withdraw or fail to meet project development deadlines as specified in this Schedule FIT. The Company shall review and adjust the annual system limits pursuant to procedures adopted by the Commission.

HAWAIIAN ELECTRIC COMPANY, INC.

D. Interconnection:

All Facilities shall be designed to interconnect and operate in parallel with the Company's system without adversely affecting the operations of its customers and without presenting safety hazards to the Company's or other customers' personnel. The Facilities and the interconnection systems must be in compliance with all applicable safety and performance standards of the National Electric Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the Company's interconnection standards and procedures provided in Rule 14, Section H, and Rule 19, as amended from time to time, and also subject to any other requirements as may be specified in the Schedule FIT Agreement.

E. Schedule FIT Agreement:

Sellers applying to participate under this Schedule FIT shall complete and sign the standard Schedule FIT agreement ("Schedule FIT Agreement") provided in Appendix I (Form of Schedule FIT Tier 1 and Tier 2 Agreement). The Schedule FIT Agreement shall specify the "Schedule FIT Contract Capacity" based on the Design Capacity (in kW AC) of the Facility.

F. Metering:

The Company shall, at its expense, install and own the requisite meter(s) to record the flow of electric energy in each direction. The Seller shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Seller's premises in accordance with the Company's Rule 14, Section A.2, as amended from time to time. Electric energy delivered to the Seller by the Company will be metered separately from the electric energy delivered by the Seller to the Company, either by use of multiple meters or a meter capable of separately recording the net inflow and outflow of electricity.

G. Purchase of Renewable Energy Delivered by Seller to Company:

(1) The Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	21.8
Tier 1 CSP \leq 20 kW	26.9
Tier 1 On-Shore Wind \leq 20 kW	16.1
Tier 1 In-line Hydropower \leq 20 kW	21.3
Tier 2 PV $>$ 20 kW and \leq 500 kW	18.9
Tier 2 CSP $>$ 20 kW and \leq 500 kW	25.4
Tier 2 On-Shore Wind $>$ 20 kW and \leq 100 kW	13.8
Tier 2 In-line Hydropower $>$ 20 kW and \leq 100 kW	18.9
Baseline FIT Rate (based on Tier XX Technology FIT Rate for Oahu)	To be determined

(2) The energy payment rates specified in paragraph G(1) are based on the 35% Hawaii state renewable energy technologies income tax credit as prescribed in the Hawaii state tax code, Hawaii Revised Statutes ("HRS") Section 235-12.5. If the Seller provides written documentation at the time of application under this Schedule FIT that the Seller will elect the tax credit refund provision for solar energy technologies as provided in HRS Section 235-12.5(g), and prior to the Commercial Operation Date provides a copy of the actual tax filing to the State Department of Taxation documenting this election, the Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	27.4
Tier 1 CSP \leq 20 kW	33.1
Tier 2 PV $>$ 20 kW and \leq 500 kW	23.8
Tier 2 CSP $>$ 20 kW and \leq 500 kW	27.5

(3) The rates paid by the Company for the electric energy purchased under this Schedule FIT may be adjusted periodically as ordered and approved by the Commission. The Seller shall receive the FIT energy payment rate in effect at the time of execution of the Schedule FIT Agreement for the entire term of the Schedule FIT Agreement, provided, however, that the FIT energy payment rate may be modified by the Commission during the term of the Agreement if it is determined by the Commission to be necessary to maintain the viability of Seller's development and operation of Facility due to changes in federal or state tax laws.

HAWAIIAN ELECTRIC COMPANY, INC.

Transmittal Letter Dated January 7, 2010.

H. Baseline FIT Rate

Facilities utilizing a Renewable Portfolio Standards ("RPS") eligible technology as defined in Hawaii Revised Statutes Section 269-91 (with the exception of biofuel projects and hybrid projects using conventional fuels or biofuels) and which are not eligible for one of the specific FIT energy payment rates set forth in this Schedule FIT, may apply for the "Baseline FIT Rate". The Baseline FIT Rate means the rate equal to the lowest specified FIT energy payment rate for any project size or technology on any island, within the applicable project size category. Projects using the Baseline FIT Rate cannot exceed the maximum size limits for Facilities.

I. Term:

Except as otherwise provided in the Schedule FIT Agreement, the term of the Schedule FIT Agreement will be twenty (20) years, commencing from the Commercial Operation Date under the Schedule FIT Agreement.

J. Electric Energy Delivered to the Seller by the Company:

Electric energy delivered to the Seller by the Company shall be billed under the Company's applicable rate schedule.

K. Allowed Project Development Timeframe:

Facilities must be placed into operation within the timeframes specified in the Schedule FIT Agreement and measured from the Execution Date of the Schedule FIT Agreement. Should a Facility fail to meet the allowed project development timeframe, the Schedule FIT Agreement will be terminated and any fees and security deposits paid to the Company by Seller will be forfeited. Sellers may request an extension of the allowed project development timeframe in accordance with the Company's Queuing procedures.

L. Schedule FIT Fees and Deposits:

(1) Application Fee. At the time the Seller's application for service under this Schedule is submitted, the Seller shall pay to Company a one-time, non-refundable application fee of \$

_____.

[Amount to be determined in collaboration with Independent Observer]

HAWAIIAN ELECTRIC COMPANY, INC.

Transmittal Letter Dated January 7, 2010.

- (2) Reservation Fee. A refundable reservation fee shall be submitted by the Seller upon acceptance of a position in the Queue. The reservation fee will be refunded to the Seller following the successful startup of the Facility within the allowed project development timeframe. The reservation fee amount shall be determined by multiplying the Schedule FIT Design Capacity in kilowatts by \$ ____ per kilowatt. [Amount to be determined in collaboration with Independent Observer]
- (3) Security Deposit. A Seller shall be required to post a security deposit or security deposits, in an amount to be determined by the Company with the concurrence of the Independent Observer, in order to proceed through the stages of the development process. Security deposits will be refundable, along with any reservation fee, upon the successful placement of the project in service.
- (4) Service Charge. A non-refundable service charge of \$25.00 per month shall be charged to the Seller for the metering, billing, and administration of the Seller's purchased power under the Schedule FIT Agreement.

M. Participation in other Company Programs:

To avoid circumstances where a Seller is receiving duplicative compensation, Sellers with multiple generators may not participate in any other Company interruptible or NEM Programs unless the multiple generators can be segregated electrically from each other and Seller demonstrates that one generator or generators is/are being used to provide electric energy to the Company for sale under the Schedule FIT and the other generator(s) is/are used exclusively for standby generation and to participate in a Company interruptible service program.

**SCHEDULE FIT TARIFF
TIER 1 AND TIER 2**

HAWAII

SCHEDULE FIT TIER 1 AND TIER 2
HAWAII ELECTRIC LIGHT COMPANY, INC. ("COMPANY")

Feed-In Tariff - Purchases from Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities

A. Availability:

This schedule feed-in tariff ("FIT") for Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities ("Schedule FIT") is available to customers, individuals, and independent power producers ("Sellers") who wish to sell to the Company electric energy from a Facility (as defined in Section B, below). This Schedule FIT sets forth the program eligibility, rates, and the terms and conditions for the sale of electric energy to the Company under this Schedule FIT.

B. Eligibility:

An eligible renewable energy generating facility under this Schedule FIT is an electric energy generating facility which meets the following criteria ("Facility"):

- (a) Sells electric energy to the Company; and
- (b)
 - (i) With respect to Tier 1 Facilities, is a new photovoltaic ("PV"), concentrated solar power ("CSP"), on-shore wind, or in-line hydropower system with a Design Capacity (defined as the capacity of the generator in kW as established by the manufacturer that is available for use at the Facility to meet customer load and/or exported to the Company system for sale to Company under the Schedule FIT) up to and including 20 kilowatts (kW) alternating current (AC); and
 - (ii) With respect to Tier 2 Facilities, is a new:
 - (A) PV system with a Design Capacity (AC) greater than 20 kW and up to and including 250 kW; or
 - (B) CSP system with a Design Capacity (AC) greater than 20 kW and up to and including 500 kW; or
 - (C) In-line hydropower or onshore wind system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW.

Except with the written consent of the Company, which consent shall not be unreasonably withheld, each physical address (defined as a single residential address or a single tax map key if a commercial or industrial facility) may not have more than one Facility of the same technology type contracted under this Schedule FIT.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Transmittal Letter Dated January 7, 2010.

This Schedule FIT shall not apply to an existing generating facility currently selling electric energy to the Company under a purchase power agreement or a Schedule Q contract, or with an existing standard interconnection agreement with the Company ("Existing Projects"). Such Existing Projects shall not be eligible to sell electric energy to the Company under this Schedule FIT.

Notwithstanding the foregoing, customers currently receiving service under the Net Energy Metering Program ("NEM Program") or owners of new generating facilities that are also eligible under the NEM Program will have a one-time option to elect to receive service under the NEM Program or to sell electric energy to the Company under this Schedule FIT. Customers receiving service under the NEM Program cannot sell excess energy production to the Company under this Schedule FIT. If a customer in the NEM Program seeks to install an additional generation facility at the same site as an existing net energy metering system, but wishes to keep such existing net energy metering system under the NEM Program and sell the electric energy from the additional generation facility to the Company under this Schedule FIT, the additional generation facility shall be separately metered, provided that such additional generating facility satisfies the definition of "Facility" under this Schedule.

Any Facility selling electric energy to the Company under this Schedule FIT shall sell all the electric energy it produces above any electric energy produced for Seller's own energy consumption, to the Company for the entire term of the Schedule FIT Agreement (see Section E, below). A Seller may not sell electric energy to third parties or renegotiate with the Company for any changes to the Schedule FIT Agreement during the term of such Schedule FIT Agreement.

C. Seller Participation:

Participation under this Schedule FIT will be available on a prioritized queue basis as determined by the Company with the concurrence of the Independent Observer (the independent third party retained by the Company and approved by the Hawaii Public Utilities Commission ("Commission") to oversee the initial development and subsequent administration of the Company's queuing and interconnection procedures). Availability of service under this Schedule FIT shall be closed to new Sellers once Schedule FIT Contract Capacity (defined as the sum of all Sellers' contracted Design Capacity) reaches applicable system limits as determined through the Company's reliability standards and other appropriate mechanisms approved by the Commission. Should additional Sellers express interest in this Schedule FIT after the applicable system limits are reached, the Company will maintain a list of interested Sellers, ranked and prioritized in a reserve queue under this Schedule FIT. Sellers on this reserve queue will be allowed to participate under this Schedule FIT according to their rank order when sufficient capacity becomes available, either due to the start of a new subscription period or if other Sellers who have entered into an Agreement withdraw or fail to meet project development deadlines as specified in this Schedule FIT. The Company shall review and adjust the annual system limits pursuant to procedures adopted by the Commission.

D. Interconnection:

All Facilities shall be designed to interconnect and operate in parallel with the Company's system without adversely affecting the operations of its customers and without presenting safety hazards to the Company's or other customers' personnel. The Facilities and the interconnection systems must be in compliance with all applicable safety and performance standards of the National Electric Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the Company's interconnection standards and procedures provided in Rule 14, Section H, and Rule 19, as amended from time to time, and also subject to any other requirements as may be specified in the Schedule FIT Agreement.

E. Schedule FIT Agreement:

Sellers applying to participate under this Schedule FIT shall complete and sign the standard Schedule FIT agreement ("Schedule FIT Agreement") provided in Appendix I (Form of Schedule FIT Tier 1 and Tier 2 Agreement). The Schedule FIT Agreement shall specify the "Schedule FIT Contract Capacity" based on the Design Capacity (in kW AC) of the Facility.

F. Metering:

The Company shall, at its expense, install and own the requisite meter(s) to record the flow of electric energy in each direction. The Seller shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Seller's premises in accordance with the Company's Rule 14, Section A.2, as amended from time to time. Electric energy delivered to the Seller by the Company will be metered separately from the electric energy delivered by the Seller to the Company, either by use of multiple meters or a meter capable of separately recording the net inflow and outflow of electricity.

G. Purchase of Renewable Energy Delivered by Seller to Company:

(1) The Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	21.8
Tier 1 CSP \leq 20 kW	26.9
Tier 1 On-Shore Wind \leq 20 kW	16.1
Tier 1 In-line Hydropower \leq 20 kW	21.3
Tier 2 PV $>$ 20 kW and \leq 250 kW	18.9
Tier 2 CSP $>$ 20 kW and \leq 500 kW	25.4
Tier 2 On-Shore Wind $>$ 20 kW and \leq 100 kW	13.8
Tier 2 In-line Hydropower $>$ 20 kW and \leq 100 kW	18.9
Baseline FIT Rate (based on Tier XX Technology FIT Rate for Oahu)	To be determined

(2) The energy payment rates specified in paragraph G(1) are based on the 35% Hawaii state renewable energy technologies income tax credit as prescribed in the Hawaii state tax code, Hawaii Revised Statutes ("HRS") Section 235-12.5. If the Seller provides written documentation at the time of application under this Schedule FIT that the Seller will elect the tax credit refund provision for solar energy technologies as provided in HRS Section 235-12.5(g), and prior to the Commercial Operation Date provides a copy of the actual tax filing to the State Department of Taxation documenting this election, the Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	27.4
Tier 1 CSP \leq 20 kW	33.1
Tier 2 PV $>$ 20 kW and \leq 250 kW	23.8
Tier 2 CSP $>$ 20 kW and \leq 500 kW	27.5

(3) The rates paid by the Company for the electric energy purchased under this Schedule FIT may be adjusted periodically as ordered and approved by the Commission. The Seller shall receive the FIT energy payment rate in effect at the time of execution of the Schedule FIT Agreement for the entire term of the Schedule FIT Agreement, provided, however, that the FIT energy payment rate may be modified by the Commission during the term of the Agreement if it is determined by the Commission to be necessary to maintain the viability of Seller's development and operation of Facility due to changes in federal or state tax laws.

HAWAII ELECTRIC LIGHT COMPANY, INC.

Transmittal Letter Dated January 7, 2010.

H. Baseline FIT Rate

Facilities utilizing a Renewable Portfolio Standards ("RPS") eligible technology as defined in Hawaii Revised Statutes Section 269-91 (with the exception of biofuel projects and hybrid projects using conventional fuels or biofuels) and which are not eligible for one of the specific FIT energy payment rates set forth in this Schedule FIT, may apply for the "Baseline FIT Rate". The Baseline FIT Rate means the rate equal to the lowest specified FIT energy payment rate for any project size or technology on any island, within the applicable project size category. Projects using the Baseline FIT Rate cannot exceed the maximum size limits for Facilities.

I. Term:

Except as otherwise provided in the Schedule FIT Agreement, the term of the Schedule FIT Agreement will be twenty (20) years, commencing from the Commercial Operation Date under the Schedule FIT Agreement.

J. Electric Energy Delivered to the Seller by the Company:

Electric energy delivered to the Seller by the Company shall be billed under the Company's applicable rate schedule.

K. Allowed Project Development Timeframe:

Facilities must be placed into operation within the timeframes specified in the Schedule FIT Agreement and measured from the Execution Date of the Schedule FIT Agreement. Should a Facility fail to meet the allowed project development timeframe, the Schedule FIT Agreement will be terminated and any fees and security deposits paid to the Company by Seller will be forfeited. Sellers may request an extension of the allowed project development timeframe in accordance with the Company's Queuing procedures.

L. Schedule FIT Fees and Deposits:

(1) Application Fee. At the time the Seller's application for service under this Schedule is submitted, the Seller shall pay to Company a one-time, non-refundable application fee of \$

_____ [Amount to be determined in collaboration with Independent Observer]

HAWAII ELECTRIC LIGHT COMPANY, INC.

Transmittal Letter Dated January 7, 2010.

- (2) Reservation Fee. A refundable reservation fee shall be submitted by the Seller upon acceptance of a position in the Queue. The reservation fee will be refunded to the Seller following the successful startup of the Facility within the allowed project development timeframe. The reservation fee amount shall be determined by multiplying the Schedule FIT Design Capacity in kilowatts by \$ ____ per kilowatt. [Amount to be determined in collaboration with Independent Observer]
- (3) Security Deposit. A Seller shall be required to post a security deposit or security deposits, in an amount to be determined by the Company with the concurrence of the Independent Observer, in order to proceed through the stages of the development process. Security deposits will be refundable, along with any reservation fee, upon the successful placement of the project in service.
- (4) Service Charge. A non-refundable service charge of \$25.00 per month shall be charged to the Seller for the metering, billing, and administration of the Seller's purchased power under the Schedule FIT Agreement.

M. Participation in other Company Programs:

To avoid circumstances where a Seller is receiving duplicative compensation, Sellers with multiple generators may not participate in any other Company interruptible or NEM Programs unless the multiple generators can be segregated electrically from each other and Seller demonstrates that one generator or generators is/are being used to provide electric energy to the Company for sale under the Schedule FIT and the other generator(s) is/are used exclusively for standby generation and to participate in a Company interruptible service program.

**SCHEDULE FIT TARIFF
TIER 1 AND TIER 2**

MAUI

MAUI DIVISON

SCHEDULE FIT TIER 1 AND TIER 2
MAUI ELECTRIC COMPANY, LIMITED. ("COMPANY")

Feed-In Tariff - Purchases from Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities

A. Availability:

This schedule feed-in tariff ("FIT") for Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities ("Schedule FIT") is available to customers, individuals, and independent power producers ("Sellers") who wish to sell to the Company electric energy from a Facility (as defined in Section B, below). This Schedule FIT sets forth the program eligibility, rates, and the terms and conditions for the sale of electric energy to the Company under this Schedule FIT.

B. Eligibility:

An eligible renewable energy generating facility under this Schedule FIT is an electric energy generating facility which meets the following criteria ("Facility"):

- (a) Sells electric energy to the Company; and
- (b)
 - (i) With respect to Tier 1 Facilities, is a new photovoltaic ("PV"), concentrated solar power ("CSP"), on-shore wind, or in-line hydropower system with a Design Capacity (defined as the capacity of the generator in kW as established by the manufacturer that is available for use at the Facility to meet customer load and/or exported to the Company system for sale to Company under the Schedule FIT) up to and including 20 kilowatts (kW) alternating current (AC); and
 - (ii) With respect to Tier 2 Facilities, is a new:
 - (A) PV system with a Design Capacity (AC) greater than 20 kW and up to and including 250 kW; or
 - (B) CSP system with a Design Capacity (AC) greater than 20 kW and up to and including 500 kW; or
 - (C) In-line hydropower or onshore wind system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW.

Except with the written consent of the Company, which consent shall not be unreasonably withheld, each physical address (defined as a single residential address or a single tax map key if a commercial or industrial facility) may not have more than one Facility of the same technology type contracted under this Schedule FIT.

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

MAUI DIVISION

This Schedule FIT shall not apply to an existing generating facility currently selling electric energy to the Company under a purchase power agreement or a Schedule Q contract, or with an existing standard interconnection agreement with the Company ("Existing Projects"). Such Existing Projects shall not be eligible to sell electric energy to the Company under this Schedule FIT.

Notwithstanding the foregoing, customers currently receiving service under the Net Energy Metering Program ("NEM Program") or owners of new generating facilities that are also eligible under the NEM Program will have a one-time option to elect to receive service under the NEM Program or to sell electric energy to the Company under this Schedule FIT. Customers receiving service under the NEM Program cannot sell excess energy production to the Company under this Schedule FIT. If a customer in the NEM Program seeks to install an additional generation facility at the same site as an existing net energy metering system, but wishes to keep such existing net energy metering system under the NEM Program and sell the electric energy from the additional generation facility to the Company under this Schedule FIT, the additional generation facility shall be separately metered, provided that such additional generating facility satisfies the definition of "Facility" under this Schedule.

Any Facility selling electric energy to the Company under this Schedule FIT shall sell all the electric energy it produces above any electric energy produced for Seller's own energy consumption, to the Company for the entire term of the Schedule FIT Agreement (see Section E, below). A Seller may not sell electric energy to third parties or renegotiate with the Company for any changes to the Schedule FIT Agreement during the term of such Schedule FIT Agreement.

C. Seller Participation:

Participation under this Schedule FIT will be available on a prioritized queue basis as determined by the Company with the concurrence of the Independent Observer (the independent third party retained by the Company and approved by the Hawaii Public Utilities Commission ("Commission") to oversee the initial development and subsequent administration of the Company's queuing and interconnection procedures). Availability of service under this Schedule FIT shall be closed to new Sellers once Schedule FIT Contract Capacity (defined as the sum of all Sellers' contracted Design Capacity) reaches applicable system limits as determined through the Company's reliability standards and other appropriate mechanisms approved by the Commission. Should additional Sellers express interest in this Schedule FIT after the applicable system limits are reached, the Company will maintain a list of interested Sellers, ranked and prioritized in a reserve queue under this Schedule FIT. Sellers on this reserve queue will be allowed to participate under this Schedule FIT according to their rank order when sufficient capacity becomes available, either due to the start of a new subscription period or if other Sellers who have entered into an Agreement withdraw or fail to meet project development deadlines as specified in this Schedule FIT. The Company shall review and adjust the annual system limits pursuant to procedures adopted by the Commission.

MECO ELECTRIC COMPANY, LIMITED

MAUI DIVISION

D. Interconnection:

All Facilities shall be designed to interconnect and operate in parallel with the Company's system without adversely affecting the operations of its customers and without presenting safety hazards to the Company's or other customers' personnel. The Facilities and the interconnection systems must be in compliance with all applicable safety and performance standards of the National Electric Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the Company's interconnection standards and procedures provided in Rule 14, Section H, and Rule 19, as amended from time to time, and also subject to any other requirements as may be specified in the Schedule FIT Agreement.

E. Schedule FIT Agreement:

Sellers applying to participate under this Schedule FIT shall complete and sign the standard Schedule FIT agreement ("Schedule FIT Agreement") provided in Appendix I (Form of Schedule FIT Tier 1 and Tier 2 Agreement). The Schedule FIT Agreement shall specify the "Schedule FIT Contract Capacity" based on the Design Capacity (in kW AC) of the Facility.

F. Metering:

The Company shall, at its expense, install and own the requisite meter(s) to record the flow of electric energy in each direction. The Seller shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Seller's premises in accordance with the Company's Rule 14, Section A.2, as amended from time to time. Electric energy delivered to the Seller by the Company will be metered separately from the electric energy delivered by the Seller to the Company, either by use of multiple meters or a meter capable of separately recording the net inflow and outflow of electricity.

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

MAUI DIVISION

G. Purchase of Renewable Energy Delivered by Seller to Company:

(1) The Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	21.8
Tier 1 CSP \leq 20 kW	26.9
Tier 1 On-Shore Wind \leq 20 kW	16.1
Tier 1 In-line Hydropower \leq 20 kW	21.3
Tier 2 PV $>$ 20 kW and \leq 250 kW	18.9
Tier 2 CSP $>$ 20 kW and \leq 500 kW	25.4
Tier 2 On-Shore Wind $>$ 20 kW and \leq 100 kW	13.8
Tier 2 In-line Hydropower $>$ 20 kW and \leq 100 kW	18.9
Baseline FIT Rate (based on Tier XX Technology FIT Rate for Oahu)	To be determined

(2) The energy payment rates specified in paragraph G(1) are based on the 35% Hawaii state renewable energy technologies income tax credit as prescribed in the Hawaii state tax code, Hawaii Revised Statutes ("HRS") Section 235-12.5. If the Seller provides written documentation at the time of application under this Schedule FIT that the Seller will elect the tax credit refund provision for solar energy technologies as provided in HRS Section 235-12.5(g), and prior to the Commercial Operation Date provides a copy of the actual tax filing to the State Department of Taxation documenting this election, the Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	27.4
Tier 1 CSP \leq 20 kW	33.1
Tier 2 PV $>$ 20 kW and \leq 250 kW	23.8
Tier 2 CSP $>$ 20 kW and \leq 500 kW	27.5

(3) The rates paid by the Company for the electric energy purchased under this Schedule FIT may be adjusted periodically as ordered and approved by the Commission. The Seller shall receive the FIT energy payment rate in effect at the time of execution of the Schedule FIT Agreement for the entire term of the Schedule FIT Agreement, provided, however, that the FIT energy payment rate may be modified by the Commission during the term of the Agreement if it is determined by the Commission to be necessary to maintain the viability of Seller's development and operation of Facility due to changes in federal or state tax laws.

MECO ELECTRIC COMPANY, LIMITED

MAUI DIVISION

H. Baseline FIT Rate

Facilities utilizing a Renewable Portfolio Standards ("RPS") eligible technology as defined in Hawaii Revised Statutes Section 269-91 (with the exception of biofuel projects and hybrid projects using conventional fuels or biofuels) and which are not eligible for one of the specific FIT energy payment rates set forth in this Schedule FIT, may apply for the "Baseline FIT Rate". The Baseline FIT Rate means the rate equal to the lowest specified FIT energy payment rate for any project size or technology on any island, within the applicable project size category. Projects using the Baseline FIT Rate cannot exceed the maximum size limits for Facilities.

I. Term:

Except as otherwise provided in the Schedule FIT Agreement, the term of the Schedule FIT Agreement will be twenty (20) years, commencing from the Commercial Operation Date under the Schedule FIT Agreement.

J. Electric Energy Delivered to the Seller by the Company:

Electric energy delivered to the Seller by the Company shall be billed under the Company's applicable rate schedule.

K. Allowed Project Development Timeframe:

Facilities must be placed into operation within the timeframes specified in the Schedule FIT Agreement and measured from the Execution Date of the Schedule FIT Agreement. Should a Facility fail to meet the allowed project development timeframe, the Schedule FIT Agreement will be terminated and any fees and security deposits paid to the Company by Seller will be forfeited. Sellers may request an extension of the allowed project development timeframe in accordance with the Company's Queuing procedures.

L. Schedule FIT Fees and Deposits:

(1) Application Fee. At the time the Seller's application for service under this Schedule is submitted, the Seller shall pay to Company a one-time, non-refundable application fee of \$

_____.

[Amount to be determined in collaboration with Independent Observer]

MECO ELECTRIC COMPANY, LIMITED

MAUI DIVISION

- (2) Reservation Fee. A refundable reservation fee shall be submitted by the Seller upon acceptance of a position in the Queue. The reservation fee will be refunded to the Seller following the successful startup of the Facility within the allowed project development timeframe. The reservation fee amount shall be determined by multiplying the Schedule FIT Design Capacity in kilowatts by \$ ____ per kilowatt. [Amount to be determined in collaboration with Independent Observer]
- (3) Security Deposit. A Seller shall be required to post a security deposit or security deposits, in an amount to be determined by the Company with the concurrence of the Independent Observer, in order to proceed through the stages of the development process. Security deposits will be refundable, along with any reservation fee, upon the successful placement of the project in service.
- (4) Service Charge. A non-refundable service charge of \$25.00 per month shall be charged to the Seller for the metering, billing, and administration of the Seller's purchased power under the Schedule FIT Agreement.

M. Participation in other Company Programs:

To avoid circumstances where a Seller is receiving duplicative compensation, Sellers with multiple generators may not participate in any other Company interruptible or NEM Programs unless the multiple generators can be segregated electrically from each other and Seller demonstrates that one generator or generators is/are being used to provide electric energy to the Company for sale under the Schedule FIT and the other generator(s) is/are used exclusively for standby generation and to participate in a Company interruptible service program.

**SCHEDULE FIT TARIFF
TIER 1 AND TIER 2**

MOLOKAI

MOLOKAI DIVISON

SCHEDULE FIT TIER 1 AND TIER 2
MAUI ELECTRIC COMPANY, LIMITED. ("COMPANY")

Feed-In Tariff - Purchases from Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities

A. Availability:

This schedule feed-in tariff ("FIT") for Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities ("Schedule FIT") is available to customers, individuals, and independent power producers ("Sellers") who wish to sell to the Company electric energy from a Facility (as defined in Section B, below). This Schedule FIT sets forth the program eligibility, rates, and the terms and conditions for the sale of electric energy to the Company under this Schedule FIT.

B. Eligibility:

An eligible renewable energy generating facility under this Schedule FIT is an electric energy generating facility which meets the following criteria ("Facility"):

- (a) Sells electric energy to the Company; and
- (b)
 - (i) With respect to Tier 1 Facilities, is a new photovoltaic ("PV"), concentrated solar power ("CSP"), on-shore wind, or in-line hydropower system with a Design Capacity (defined as the capacity of the generator in kW as established by the manufacturer that is available for use at the Facility to meet customer load and/or exported to the Company system for sale to Company under the Schedule FIT) up to and including 20 kilowatts (kW) alternating current (AC); and
 - (ii) With respect to Tier 2 Facilities, is a new:
 - (A) PV system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW; or
 - (B) CSP system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW; or
 - (C) In-line hydropower or onshore wind system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW.

Except with the written consent of the Company, which consent shall not be unreasonably withheld, each physical address (defined as a single residential address or a single tax map key if a commercial or industrial facility) may not have more than one Facility of the same technology type contracted under this Schedule FIT.

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

MOLOKAI DIVISON

This Schedule FIT shall not apply to an existing generating facility currently selling electric energy to the Company under a purchase power agreement or a Schedule Q contract, or with an existing standard interconnection agreement with the Company ("Existing Projects"). Such Existing Projects shall not be eligible to sell electric energy to the Company under this Schedule FIT.

Notwithstanding the foregoing, customers currently receiving service under the Net Energy Metering Program ("NEM Program") or owners of new generating facilities that are also eligible under the NEM Program will have a one-time option to elect to receive service under the NEM Program or to sell electric energy to the Company under this Schedule FIT. Customers receiving service under the NEM Program cannot sell excess energy production to the Company under this Schedule FIT. If a customer in the NEM Program seeks to install an additional generation facility at the same site as an existing net energy metering system, but wishes to keep such existing net energy metering system under the NEM Program and sell the electric energy from the additional generation facility to the Company under this Schedule FIT, the additional generation facility shall be separately metered, provided that such additional generating facility satisfies the definition of "Facility" under this Schedule.

Any Facility selling electric energy to the Company under this Schedule FIT shall sell all the electric energy it produces above any electric energy produced for Seller's own energy consumption, to the Company for the entire term of the Schedule FIT Agreement (see Section E, below). A Seller may not sell electric energy to third parties or renegotiate with the Company for any changes to the Schedule FIT Agreement during the term of such Schedule FIT Agreement.

C. Seller Participation:

Participation under this Schedule FIT will be available on a prioritized queue basis as determined by the Company with the concurrence of the Independent Observer (the independent third party retained by the Company and approved by the Hawaii Public Utilities Commission ("Commission") to oversee the initial development and subsequent administration of the Company's queuing and interconnection procedures). Availability of service under this Schedule FIT shall be closed to new Sellers once Schedule FIT Contract Capacity (defined as the sum of all Sellers' contracted Design Capacity) reaches applicable system limits as determined through the Company's reliability standards and other appropriate mechanisms approved by the Commission. Should additional Sellers express interest in this Schedule FIT after the applicable system limits are reached, the Company will maintain a list of interested Sellers, ranked and prioritized in a reserve queue under this Schedule FIT. Sellers on this reserve queue will be allowed to participate under this Schedule FIT according to their rank order when sufficient capacity becomes available, either due to the start of a new subscription period or if other Sellers who have entered into an Agreement withdraw or fail to meet project development deadlines as specified in this Schedule FIT. The Company shall review and adjust the annual system limits pursuant to procedures adopted by the Commission.

MECO ELECTRIC COMPANY, LIMITED

MOLOKAI DIVISON

D. Interconnection:

All Facilities shall be designed to interconnect and operate in parallel with the Company's system without adversely affecting the operations of its customers and without presenting safety hazards to the Company's or other customers' personnel. The Facilities and the interconnection systems must be in compliance with all applicable safety and performance standards of the National Electric Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the Company's interconnection standards and procedures provided in Rule 14, Section H, and Rule 19, as amended from time to time, and also subject to any other requirements as may be specified in the Schedule FIT Agreement.

E. Schedule FIT Agreement:

Sellers applying to participate under this Schedule FIT shall complete and sign the standard Schedule FIT agreement ("Schedule FIT Agreement") provided in Appendix I (Form of Schedule FIT Tier 1 and Tier 2 Agreement). The Schedule FIT Agreement shall specify the "Schedule FIT Contract Capacity" based on the Design Capacity (in kW AC) of the Facility.

F. Metering:

The Company shall, at its expense, install and own the requisite meter(s) to record the flow of electric energy in each direction. The Seller shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Seller's premises in accordance with the Company's Rule 14, Section A.2, as amended from time to time. Electric energy delivered to the Seller by the Company will be metered separately from the electric energy delivered by the Seller to the Company, either by use of multiple meters or a meter capable of separately recording the net inflow and outflow of electricity.

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

MOLOKAI DIVISION

G. Purchase of Renewable Energy Delivered by Seller to Company:

(1) The Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	21.8
Tier 1 CSP \leq 20 kW	26.9
Tier 1 On-Shore Wind \leq 20 kW	16.1
Tier 1 In-line Hydropower \leq 20 kW	21.3
Tier 2 PV > 20 kW and \leq 100 kW	18.9
Tier 2 CSP > 20 kW and \leq 100 kW	25.4
Tier 2 On-Shore Wind > 20 kW and \leq 100 kW	13.8
Tier 2 In-line Hydropower > 20 kW and \leq 100 kW	18.9
Baseline FIT Rate (based on Tier XX Technology FIT Rate for Oahu)	To be determined

(2) The energy payment rates specified in paragraph G(1) are based on the 35% Hawaii state renewable energy technologies income tax credit as prescribed in the Hawaii state tax code, Hawaii Revised Statutes ("HRS") Section 235-12.5. If the Seller provides written documentation at the time of application under this Schedule FIT that the Seller will elect the tax credit refund provision for solar energy technologies as provided in HRS Section 235-12.5(g), and prior to the Commercial Operation Date provides a copy of the actual tax filing to the State Department of Taxation documenting this election, the Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	27.4
Tier 1 CSP \leq 20 kW	33.1
Tier 2 PV > 20 kW and \leq 100 kW	23.8
Tier 2 CSP > 20 kW and \leq 100 kW	27.5

(3) The rates paid by the Company for the electric energy purchased under this Schedule FIT may be adjusted periodically as ordered and approved by the Commission. The Seller shall receive the FIT energy payment rate in effect at the time of execution of the Schedule FIT Agreement for the entire term of the Schedule FIT Agreement, provided, however, that the FIT energy payment rate may be modified by the Commission during the term of the Agreement if it is determined by the Commission to be necessary to maintain the viability of Seller's development and operation of Facility due to changes in federal or state tax laws.

MECO ELECTRIC COMPANY, LIMITED

MOLOKAI DIVISON

H. Baseline FIT Rate

Facilities utilizing a Renewable Portfolio Standards ("RPS") eligible technology as defined in Hawaii Revised Statutes Section 269-91 (with the exception of biofuel projects and hybrid projects using conventional fuels or biofuels) and which are not eligible for one of the specific FIT energy payment rates set forth in this Schedule FIT, may apply for the "Baseline FIT Rate". The Baseline FIT Rate means the rate equal to the lowest specified FIT energy payment rate for any project size or technology on any island, within the applicable project size category. Projects using the Baseline FIT Rate cannot exceed the maximum size limits for Facilities.

I. Term:

Except as otherwise provided in the Schedule FIT Agreement, the term of the Schedule FIT Agreement will be twenty (20) years, commencing from the Commercial Operation Date under the Schedule FIT Agreement.

J. Electric Energy Delivered to the Seller by the Company:

Electric energy delivered to the Seller by the Company shall be billed under the Company's applicable rate schedule.

K. Allowed Project Development Timeframe:

Facilities must be placed into operation within the timeframes specified in the Schedule FIT Agreement and measured from the Execution Date of the Schedule FIT Agreement. Should a Facility fail to meet the allowed project development timeframe, the Schedule FIT Agreement will be terminated and any fees and security deposits paid to the Company by Seller will be forfeited. Sellers may request an extension of the allowed project development timeframe in accordance with the Company's Queuing procedures.

L. Schedule FIT Fees and Deposits:

(1) Application Fee. At the time the Seller's application for service under this Schedule is submitted, the Seller shall pay to Company a one-time, non-refundable application fee of \$

_____.

[Amount to be determined in collaboration with Independent Observer]

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

MOLOKAI DIVISON

- (2) Reservation Fee. A refundable reservation fee shall be submitted by the Seller upon acceptance of a position in the Queue. The reservation fee will be refunded to the Seller following the successful startup of the Facility within the allowed project development timeframe. The reservation fee amount shall be determined by multiplying the Schedule FIT Design Capacity in kilowatts by \$ ____ per kilowatt. [Amount to be determined in collaboration with Independent Observer]
- (3) Security Deposit. A Seller shall be required to post a security deposit or security deposits, in an amount to be determined by the Company with the concurrence of the Independent Observer, in order to proceed through the stages of the development process. Security deposits will be refundable, along with any reservation fee, upon the successful placement of the project in service.
- (4) Service Charge. A non-refundable service charge of \$25.00 per month shall be charged to the Seller for the metering, billing, and administration of the Seller's purchased power under the Schedule FIT Agreement.

M. Participation in other Company Programs:

To avoid circumstances where a Seller is receiving duplicative compensation, Sellers with multiple generators may not participate in any other Company interruptible or NEM Programs unless the multiple generators can be segregated electrically from each other and Seller demonstrates that one generator or generators is/are being used to provide electric energy to the Company for sale under the Schedule FIT and the other generator(s) is/are used exclusively for standby generation and to participate in a Company interruptible service program.

**SCHEDULE FIT TARIFF
TIER 1 AND TIER 2**

LANAI

LANAI DIVISION

SCHEDULE FIT TIER 1 AND TIER 2
MAUI ELECTRIC COMPANY, LIMITED ("COMPANY")

Feed-In Tariff - Purchases from Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities

A. Availability:

This schedule feed-in tariff ("FIT") for Tier 1 and Tier 2 Eligible Renewable Energy Generating Facilities ("Schedule FIT") is available to customers, individuals, and independent power producers ("Sellers") who wish to sell to the Company electric energy from a Facility (as defined in Section B, below). This Schedule FIT sets forth the program eligibility, rates, and the terms and conditions for the sale of electric energy to the Company under this Schedule FIT.

B. Eligibility:

An eligible renewable energy generating facility under this Schedule FIT is an electric energy generating facility which meets the following criteria ("Facility"):

- (a) Sells electric energy to the Company; and
- (b)
 - (i) With respect to Tier 1 Facilities, is a new photovoltaic ("PV"), concentrated solar power ("CSP"), on-shore wind, or in-line hydropower system with a Design Capacity (defined as the capacity of the generator in kW as established by the manufacturer that is available for use at the Facility to meet customer load and/or exported to the Company system for sale to Company under the Schedule FIT) up to and including 20 kilowatts (kW) alternating current (AC); and
 - (ii) With respect to Tier 2 Facilities, is a new:
 - (A) PV system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW; or
 - (B) CSP system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW; or
 - (C) In-line hydropower or onshore wind system with a Design Capacity (AC) greater than 20 kW and up to and including 100 kW.

Except with the written consent of the Company, which consent shall not be unreasonably withheld, each physical address (defined as a single residential address or a single tax map key if a commercial or industrial facility) may not have more than one Facility of the same technology type contracted under this Schedule FIT.

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

LANAI DIVISON

This Schedule FIT shall not apply to an existing generating facility currently selling electric energy to the Company under a purchase power agreement or a Schedule Q contract, or with an existing standard interconnection agreement with the Company ("Existing Projects"). Such Existing Projects shall not be eligible to sell electric energy to the Company under this Schedule FIT.

Notwithstanding the foregoing, customers currently receiving service under the Net Energy Metering Program ("NEM Program") or owners of new generating facilities that are also eligible under the NEM Program will have a one-time option to elect to receive service under the NEM Program or to sell electric energy to the Company under this Schedule FIT. Customers receiving service under the NEM Program cannot sell excess energy production to the Company under this Schedule FIT. If a customer in the NEM Program seeks to install an additional generation facility at the same site as an existing net energy metering system, but wishes to keep such existing net energy metering system under the NEM Program and sell the electric energy from the additional generation facility to the Company under this Schedule FIT, the additional generation facility shall be separately metered, provided that such additional generating facility satisfies the definition of "Facility" under this Schedule.

Any Facility selling electric energy to the Company under this Schedule FIT shall sell all the electric energy it produces above any electric energy produced for Seller's own energy consumption, to the Company for the entire term of the Schedule FIT Agreement (see Section E, below). A Seller may not sell electric energy to third parties or renegotiate with the Company for any changes to the Schedule FIT Agreement during the term of such Schedule FIT Agreement.

C. Seller Participation:

Participation under this Schedule FIT will be available on a prioritized queue basis as determined by the Company with the concurrence of the Independent Observer (the independent third party retained by the Company and approved by the Hawaii Public Utilities Commission ("Commission") to oversee the initial development and subsequent administration of the Company's queuing and interconnection procedures). Availability of service under this Schedule FIT shall be closed to new Sellers once Schedule FIT Contract Capacity (defined as the sum of all Sellers' contracted Design Capacity) reaches applicable system limits as determined through the Company's reliability standards and other appropriate mechanisms approved by the Commission. Should additional Sellers express interest in this Schedule FIT after the applicable system limits are reached, the Company will maintain a list of interested Sellers, ranked and prioritized in a reserve queue under this Schedule FIT. Sellers on this reserve queue will be allowed to participate under this Schedule FIT according to their rank order when sufficient capacity becomes available, either due to the start of a new subscription period or if other Sellers who have entered into an Agreement withdraw or fail to meet project development deadlines as specified in this Schedule FIT. The Company shall review and adjust the annual system limits pursuant to procedures adopted by the Commission.

MECO ELECTRIC COMPANY, LIMITED

LANAI DIVISON

D. Interconnection:

All Facilities shall be designed to interconnect and operate in parallel with the Company's system without adversely affecting the operations of its customers and without presenting safety hazards to the Company's or other customers' personnel. The Facilities and the interconnection systems must be in compliance with all applicable safety and performance standards of the National Electric Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), the Company's interconnection standards and procedures provided in Rule 14, Section H, and Rule 19, as amended from time to time, and also subject to any other requirements as may be specified in the Schedule FIT Agreement.

E. Schedule FIT Agreement:

Sellers applying to participate under this Schedule FIT shall complete and sign the standard Schedule FIT agreement ("Schedule FIT Agreement") provided in Appendix I (Form of Schedule FIT Tier 1 and Tier 2 Agreement). The Schedule FIT Agreement shall specify the "Schedule FIT Contract Capacity" based on the Design Capacity (in kW AC) of the Facility.

F. Metering:

The Company shall, at its expense, install and own the requisite meter(s) to record the flow of electric energy in each direction. The Seller shall, at its expense, provide, install and maintain all conductors, service switches, fuses, meter sockets, meter instrument transformer housing and mountings, switchboard meter test buses, meter panels and similar devices required for service connection and meter installations on the Seller's premises in accordance with the Company's Rule 14, Section A.2, as amended from time to time. Electric energy delivered to the Seller by the Company will be metered separately from the electric energy delivered by the Seller to the Company, either by use of multiple meters or a meter capable of separately recording the net inflow and outflow of electricity.

MECO ELECTRIC COMPANY, LIMITED

Transmittal Letter Dated January 7, 2010.

LANAI DIVISON

G. Purchase of Renewable Energy Delivered by Seller to Company:

(1) The Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	21.8
Tier 1 CSP \leq 20 kW	26.9
Tier 1 On-Shore Wind \leq 20 kW	16.1
Tier 1 In-line Hydropower \leq 20 kW	21.3
Tier 2 PV $>$ 20 kW and \leq 100 kW	18.9
Tier 2 CSP $>$ 20 kW and \leq 100 kW	25.4
Tier 2 On-Shore Wind $>$ 20 kW and \leq 100 kW	13.8
Tier 2 In-line Hydropower $>$ 20 kW and \leq 100 kW	18.9
Baseline FIT Rate (based on Tier XX Technology FIT Rate for Oahu)	To be determined

(2) The energy payment rates specified in paragraph G(1) are based on the 35% Hawaii state renewable energy technologies income tax credit as prescribed in the Hawaii state tax code, Hawaii Revised Statutes ("HRS") Section 235-12.5. If the Seller provides written documentation at the time of application under this Schedule FIT that the Seller will elect the tax credit refund provision for solar energy technologies as provided in HRS Section 235-12.5(g), and prior to the Commercial Operation Date provides a copy of the actual tax filing to the State Department of Taxation documenting this election, the Company shall pay for each kilowatt-hour ("kWh") of electric energy delivered to the Company by Seller as follows:

Renewable Generator Type and Size	FIT Energy Payment Rate (¢/kWh)
Tier 1 PV \leq 20 kW	27.4
Tier 1 CSP \leq 20 kW	33.1
Tier 2 PV $>$ 20 kW and \leq 100 kW	23.8
Tier 2 CSP $>$ 20 kW and \leq 100 kW	27.5

(3) The rates paid by the Company for the electric energy purchased under this Schedule FIT may be adjusted periodically as ordered and approved by the Commission. The Seller shall receive the FIT energy payment rate in effect at the time of execution of the Schedule FIT Agreement for the entire term of the Schedule FIT Agreement, provided, however, that the FIT energy payment rate may be modified by the Commission during the term of the Agreement if it is determined by the Commission to be necessary to maintain the viability of Seller's development and operation of Facility due to changes in federal or state tax laws.

MECO ELECTRIC COMPANY, LIMITED

LANAI DIVISON

H. Baseline FIT Rate

Facilities utilizing a Renewable Portfolio Standards ("RPS") eligible technology as defined in Hawaii Revised Statutes Section 269-91 (with the exception of biofuel projects and hybrid projects using conventional fuels or biofuels) and which are not eligible for one of the specific FIT energy payment rates set forth in this Schedule FIT, may apply for the "Baseline FIT Rate". The Baseline FIT Rate means the rate equal to the lowest specified FIT energy payment rate for any project size or technology on any island, within the applicable project size category. Projects using the Baseline FIT Rate cannot exceed the maximum size limits for Facilities.

I. Term:

Except as otherwise provided in the Schedule FIT Agreement, the term of the Schedule FIT Agreement will be twenty (20) years, commencing from the Commercial Operation Date under the Schedule FIT Agreement.

J. Electric Energy Delivered to the Seller by the Company:

Electric energy delivered to the Seller by the Company shall be billed under the Company's applicable rate schedule.

K. Allowed Project Development Timeframe:

Facilities must be placed into operation within the timeframes specified in the Schedule FIT Agreement and measured from the Execution Date of the Schedule FIT Agreement. Should a Facility fail to meet the allowed project development timeframe, the Schedule FIT Agreement will be terminated and any fees and security deposits paid to the Company by Seller will be forfeited. Sellers may request an extension of the allowed project development timeframe in accordance with the Company's Queuing procedures.

L. Schedule FIT Fees and Deposits:

(1) Application Fee. At the time the Seller's application for service under this Schedule is submitted, the Seller shall pay to Company a one-time, non-refundable application fee of \$

[Amount to be determined in collaboration with Independent Observer]

MECO ELECTRIC COMPANY, LIMITED

LANAI DIVISION

(2) Reservation Fee. A refundable reservation fee shall be submitted by the Seller upon acceptance of a position in the Queue. The reservation fee will be refunded to the Seller following the successful startup of the Facility within the allowed project development timeframe. The reservation fee amount shall be determined by multiplying the Schedule FIT Design Capacity in kilowatts by \$ ____ per kilowatt. [Amount to be determined in collaboration with Independent Observer]

(3) Security Deposit. A Seller shall be required to post a security deposit or security deposits, in an amount to be determined by the Company with the concurrence of the Independent Observer, in order to proceed through the stages of the development process. Security deposits will be refundable, along with any reservation fee, upon the successful placement of the project in service.

(4) Service Charge. A non-refundable service charge of \$25.00 per month shall be charged to the Seller for the metering, billing, and administration of the Seller's purchased power under the Schedule FIT Agreement.

M. Participation in other Company Programs:

To avoid circumstances where a Seller is receiving duplicative compensation, Sellers with multiple generators may not participate in any other Company interruptible or NEM Programs unless the multiple generators can be segregated electrically from each other and Seller demonstrates that one generator or generators is/are being used to provide electric energy to the Company for sale under the Schedule FIT and the other generator(s) is/are used exclusively for standby generation and to participate in a Company interruptible service program.

**SCHEDULE FIT
STANDARD AGREEMENT
FOR
TIER 1 AND TIER 2**

SCHEDULE FIT TIER 1 AND TIER 2 AGREEMENT

This Schedule FIT Tier 1 and Tier 2 Agreement ("Agreement") is made on _____, and entered into by and between _____ ("Seller") and _____ ("Company"), sometimes also referred to herein jointly as "Parties" or individually as "Party." This Agreement is applicable only to sellers who own and/or operate a Facility as set forth in the Company's Schedule FIT relating to Feed-in Tariff purchases from Tier 1 and Tier 2 eligible renewable electric energy generating facilities ("Schedule FIT"), and only to the Facility described and installed at the following location _____. This Agreement provides for (1) Seller's interconnection and operation of the Facility in parallel with the Company System, and (2) the Company's purchase of electrical energy produced by the Facility and delivered to the Point of Interconnection with the Company System.

For Federal Government Entities, this Agreement is incorporated by reference into Contract No. _____ and modifications thereto _____.

In consideration of the premises and the respective promises herein, the Company and the Seller hereby agree as follows:

1. Parallel Operation: The Company agrees to allow the Seller to interconnect and operate in parallel with the Company System in accordance with the terms and conditions of this Agreement.
2. Purchase of Electric Energy by the Company; Billing and Payment:
 - (a) The Company agrees to purchase electric energy from the Seller pursuant to the terms and conditions of the applicable electric energy payment rate schedule set forth in the Schedule FIT and Appendix C (Purchase of Electric Energy By Company) attached hereto commencing from the date of initial delivery of electric energy under this Agreement from the Facility to the Company (the "Commercial Operation Date"). The Company will not reimburse the Seller for any taxes or fees imposed on the Seller including, but not limited to, State of Hawaii general excise tax.
 - (b) The Seller agrees to sell all electric energy, above any electric energy produced for self consumption, to the Company for the entire FIT Term. The Seller shall not sell electric energy to third parties or attempt to renegotiate the terms and conditions of this Agreement during the FIT Term.
 - (c) A statement for electric energy purchased will be rendered and payment will be made for such electric energy in accordance with the applicable Company provisions and processes which the Company will advise the Seller of at the time of execution of this Agreement.
 - (d) A bill for the energy delivered to the Seller by the Company shall be delivered separately from the payment for energy purchased from the Seller by the Company. The Company shall determine the amount of energy purchased by the Company and shall provide a

statement along with payment for energy purchased from the Seller by the Company within thirty (30) days of the end of the billing period.

- (e) In the event adjustments are required to correct inaccuracies in an invoice after payment, the Party requesting adjustment shall recompute and include in the Party's request the amounts due during the period of the inaccuracy. The difference between the amount paid and that recomputed for the invoice shall either be (i) paid to Seller, or set-off by the Company against the next invoice payment to Seller, as appropriate, together with interest from the date that such invoice was payable until the date that such recomputed amount is paid at the average daily prime rate at the Bank of Hawaii for the period, or (ii) objected to by the Party responsible for such payment within thirty (30) days following its receipt of such request. All claims for adjustments by either Party shall be waived for any deliveries of electricity made more than thirty-six (36) months preceding the date of any such request.
- (f) The Seller, after giving reasonable advance written notice to the Company, shall have the right to review all billing, metering and related records relating to the Facility during normal working hours on working days. The Company shall maintain such records for a period of not less than thirty-six (36) months from the date of creation of such records.
- (g) This Agreement shall not be construed to constitute a "take or pay" contract and the Company shall have no obligation to pay for any electric energy that has not actually been generated by the Facility, measured by the Company's installed metering, and delivered to the Company at the Point of Interconnection as designated herein.

3. Sale of Electric Energy by the Company to the Seller: Sales of electric energy by the Company to the Seller shall be governed by the applicable rate schedule and the Company's rules filed with the Hawaii Public Utilities Commission ("Commission") and not by this Agreement.

4. Seller's Obligations: (a) Interconnection. Sellers seeking to interconnect and operate a Facility in parallel with the Company System shall comply at all times with Appendix B (Interconnection Requirements) of this Agreement and the provisions of Appendix I to Company Tariff, Rule 14, Section H (Distributed Generating Facility Interconnection Standards and Technical Requirements) prior to operating the Facility in parallel with the Company System. Nothing in this Agreement shall affect the Company's right to refuse or discontinue service as provided in the Company Tariff, Rules 7.A.1 and Rule 7.A.2. Seller requests to interconnect and operate a Facility in parallel with the Company System under the Schedule FIT will be processed in accordance with the procedures for queuing and interconnection approved by the Commission.

(b) Good Engineering and Operating Practices. Without limiting the foregoing, Seller shall install, operate, repair and maintain its Facility and perform all obligations required to be performed under this Agreement in accordance with Good Engineering and Operating Practices in the electric industry and all applicable laws, rules, regulations, orders, tariffs and construction and safety codes.

(c) Permits and Licenses. The Seller shall obtain, at its expense, any and all authorizations, approvals, permits, and licenses required for the construction and operation of the Facility and the interconnection with the Company System, including but not limited to environmental permits, building permits, rights-of-way, or easements. The Facility shall be inspected and approved by the local authority having jurisdiction and all permits shall be closed before the Company will allow interconnection with the Company System.

5. Personnel and Company System Safety: Notwithstanding any other provisions of this Agreement, the Company may disconnect the Facility from the Company System, without prior notice to the Seller, (a) to eliminate conditions that constitute a potential hazard to the Company's personnel or the general public; (b) if pre-emergency or emergency conditions exist on the Company System; (c) if a hazardous condition relating to the Facility is observed by the Company's inspection; (d) if the Facility interferes with the Company's equipment or equipment belonging to other customers of the Company (including non-utility generating equipment); or (e) if the Seller of the Facility has tampered with any protective device. The Facility shall remain disconnected until such time as the Company is satisfied that the endangering condition(s) as listed above has been corrected, and the Company shall not be obligated to allow parallel operation of the Facility during such period. If the Company disconnects the Facility under this Section 5, it shall as soon as practicable notify the Seller in person, by telephone, by electronic mail, or by facsimile and provide the reason(s) why the Facility was disconnected from the Company System. Following the rectification of the endangering conditions, the Company shall provide, within fifteen (15) business days or such other period as is mutually agreed upon in writing by the Company and the Seller, written documentation of the occurrence of the endangering conditions, and of the disconnection of the Facility. The disconnection of a Facility shall not be subject to standby service charges provided that the disconnection was caused by the Company or the Company's equipment. The procedure for determining the applicability of standby charges to a disconnection event shall be specified in the Company's Schedule SS Standby Service tariff.

6. Continuity of Service: This Section 6 (Continuity of Service) shall apply to all Facilities with a Design Capacity above the trigger for Supervisory Control and Data Acquisition ("SCADA") set forth in the Company Tariff, Rule 14, Section H, and to all other Facilities, regardless of size, where it is deemed, at the Company's sole discretion, that an alternate means of curtailment is technically feasible.

- (a) The Company may require the Seller to temporarily curtail, interrupt or reduce deliveries of energy when necessary in order for the Company to construct, install, maintain, repair, replace, remove, investigate, test or inspect any of its equipment or any part of the Company System including, but not limited to, accommodating the installation and/or testing of non-utility owned facilities to the Company System; or if the Company determines that such curtailment, interruption or reduction is necessary because of a system emergency, forced outage, operating conditions on its system; or the inability to accept deliveries of energy due to excess energy conditions; or if either the Facility does not operate in compliance with Good Engineering and Operating Practices or acceptance of energy from the Seller by the Company would require the Company to operate the

Company System outside of Good Engineering and Operating Practices which in this case shall include, but not be limited to, excessive system frequency fluctuations or excessive voltage deviations, and any situation that the Company System Operator determines, at his or her sole discretion, could place in jeopardy system reliability. In the event that the Company temporarily curtails, interrupts, or reduces deliveries of energy pursuant to this Section 6(a), the Company shall not be obligated to accept or pay for any energy from the Seller except for such energy that the Company notifies the Seller that it is able to take during this period due to the aforesaid circumstances.

- (b) The Company shall not be required to purchase energy during any period during which, due to operational circumstances, purchases from the Seller will result in costs greater than those which the Company would incur if it did not make those purchases, but instead generated an equivalent amount of energy itself. The Company shall provide the Seller with at least twenty-four (24) hours advance oral or written notice of any such period to allow the Seller to cease the delivery of energy to the Company. The Company and the Seller will work to develop a mutually acceptable format for this notice, including, but not limited to, a listing of typical parameters that define anticipated constraints in purchases from the Seller. If the Company fails to provide such notice, it will pay the same rate for such purchase of energy as would be required had the period not occurred. Without limiting the foregoing, conditions when curtailment of energy delivery by the Seller may be implemented by the Company may include when, during excess energy conditions, the Company would have to (i) cycle off-line any Base Load Unit, or (ii) remove one or more components of a combined cycle unit (such as shutting off one combustion turbine or one combustion turbine and the steam turbine of a dual-train combined cycle unit (consisting of two combustion turbines and one steam turbine)) in order to purchase energy from the Seller. The Company shall not curtail pursuant to this Section 6(b) of the Agreement solely as a consequence of the Company's filed Avoided Energy Cost Data being lower than the applicable energy payment rate paid to the Seller under this Agreement.
- (c) Section 6 (Continuity of Service) of this Agreement is not intended to permit the Company to require the Seller to curtail, interrupt or reduce deliveries of energy based on the Company's economic dispatch (for example, as a consequence of the Company's filed Avoided Energy Cost Data being lower than the applicable energy payment rate paid to the Seller under this Agreement, or to make purchases of less expensive energy from a Qualifying Facility or other facility).
- (d) Pursuant to Section 5 (Personnel and Company System Safety) and Section 6 (Continuity of Service) of the Agreement, the Company may at times have limited ability to integrate energy produced by the Seller into the Company System for engineering and/or operating reasons and may be required to curtail energy deliveries by the Seller. When a curtailment control signal is received by the Facility, the corresponding action (e.g.,

decrease in the Facility's output) shall be initiated by the Seller without delay. Unless agreed to in writing by both Parties, the curtailment signal will lower the Facility output to zero. The Seller shall not override the Company's curtailment. As conditions warrant, the Company shall end the curtailment when it is reasonably determined that the reason for the curtailment is no longer in existence. The Company System Operator shall end the curtailment by sending raise control signal to the Facility. Seller may request that Facility be restored no sooner than one hour after the Company has curtailed the Facility.

- (e) When the Company determines that curtailment of energy becomes necessary for reasons other than those directly attributable to the Facility, curtailments shall be made to all curtailable facilities interconnecting with the Company System under Schedule FIT Agreements in accordance with Section 6(f) below. . When the Company determines that curtailment of energy becomes necessary for engineering and/or operating reasons that are directly attributable to the Facility, the curtailment protocol set forth in Section 6(f) below may not apply. The Company shall not be liable to the Seller for any such curtailments unless they were in violation of Section 5 (Personnel and Company System Safety) or Section 6 (Continuity of Service) of the Agreement. Seller shall not override Company's curtailment.
- (f) **[METHODOLOGY FOR DETERMINING THE ORDERING OF FACILITIES FOR PURPOSE OF CURTAILMENT TO BE DETERMINED]**

7. Metering:

- (a) Meters - The Company shall purchase and own meters suitable for measuring the net energy output of the Facility sold to the Company in kilowatts ("kW") and kilowatthours ("kWh") on a time-of-day basis and of reactive power flow in kilovars and true root mean square kilovarhours "(VARh)". The metering point shall be at the Point of Interconnection. The Seller shall supply, at no expense to the Company, a mutually agreeable location and mounting structure for meters and associated equipment. The Company will calibrate these devices in accordance with the latest edition of the American National Standards Institute (ANSI) Code for Electricity Metering. All meters shall be ratcheted to prevent reversal. The Company shall install, maintain and periodically test such meters as the Company deems appropriate and shall be reimbursed by Seller for all reasonably incurred costs for such installation, maintenance and testing work.
- (b) Meter Testing - The Company shall provide at least twenty-four (24) hours notice to Seller prior to any test it may perform on the metering or telemetering equipment. The Seller shall have the right to have a representative present during each such test. Seller may request, and the Company shall perform if requested, tests in addition to the periodic

test in Section 7(a) (Meters) above and Seller shall pay the cost of such test. If any of the metering equipment is found to be inaccurate at any time, as determined by testing in accordance with this Section 7(b) (Meter Testing), the Company shall promptly cause such equipment to be made accurate, and the period of inaccuracy, as well as an estimate for correct meter readings, shall be determined in accordance with Section 7(c) (Corrections).

- (c) Corrections - If any test of metering equipment conducted by the Company indicates that the meter readings are in error by one percent (1%) or more, the meter readings shall be corrected as follows: (i) determine the error by testing the meter at approximately ten percent (10%) of the rated current (test amperes) specified for the meter; (ii) determine the error by testing the meter at approximately one hundred percent (100%) of the rated current (test amperes) specified for the meter; and (iii) the average meter error shall then be computed as the sum of one-fifth (1/5) the error determined in (i) and four-fifths (4/5) the error determined in (ii). The average meter error shall be used to adjust the bills for the amount of electric energy supplied to the Company from Facility for a time period to be determined in accordance with Company Tariff, Rule 11, unless records of the Company conclusively establish that such error existed for a greater or lesser period, in which case the correction shall cover such actual period of error.

8. Specifications, Determinations and Approvals. (a) Wherever in this Agreement, including the Appendices, the Company has the right to give specifications, determinations or approvals, such specifications, determinations or approvals shall be given in accordance with the Company's standard practices, policies and procedures, which may include the Company's Electric Service Installation Manual, the Company's Engineering Standard Practice Manual and Institute of Electrical and Electronics Engineers ("IEEE") guides and standards for protective relaying systems.

(b) The Company's review and authorization to allow the Facility to interconnect and operate in parallel with the Company System shall not be construed as confirming or endorsing the Facility's design or as warranting the Facility's safety, durability or reliability. The Company shall not, by reason of such review or lack of review, be responsible for the equipment, including but not limited to, the safety, strength, adequacy, durability, reliability, performance, or capacity of such equipment.

9. Term: Except as otherwise provided herein, this Agreement shall become effective upon the date of execution by both the Seller and the Company ("Execution Date") and shall remain in effect for a term of twenty years from the Commercial Operation Date ("FIT Term"). Upon the expiration of the FIT Term, Seller shall offer to sell its electric energy to the Company on an annual basis at the modified FIT electric energy payment rate to be determined and approved by the Commission. The Company does not have an obligation to purchase electric energy from Seller after the FIT Term, however, if the Company does, in its sole discretion, exercise its option to purchase electric energy, it will notify Seller no less than six months prior to the expiration of the FIT Term.

10. Termination Rights:

(a) If any of the following conditions occur during the FIT Term, then the Company shall have the right to terminate this Agreement:

- (i) The Seller, by act or omission, materially breaches or defaults on any material covenant, condition or other provision of this Agreement, and fails to cure such breach or default within thirty (30) Days after written notice of such breach or default from the Company, unless such breach or default cannot be cured within thirty (30) Days and the Seller is making diligent efforts to cure such breach or default, provided, however, that if such breach or default is not cured within one hundred eighty (180) Days of such notice, the Company may terminate this Agreement;
- (ii) The Seller makes a general assignment for the benefit of its creditors;
- (iii) The Seller files bankruptcy, has a petition for involuntary bankruptcy filed against it, or has a receiver appointed because of insolvency;
- (iv) The Seller's dissolution or liquidation;
- (v) The Seller's actual fraud, waste, tampering with Company owned facilities, theft of Company property or other material intentional misrepresentation or misconduct in connection with this Agreement and/or the operation of the Facility;
- (vi) The Seller's abandonment of construction or operation of the Facility;
- (vii) The Seller's failure to maintain required interconnection equipment in accordance with Section 4 (Seller's Obligations);
- (viii) If due to a Force Majeure event Seller is prevented from performing any material obligation under this Agreement for one hundred eighty (180) Days or longer; or
- (ix) Seller fails to achieve the Commercial Operation Date as set forth in Section 11 (Facility Development Milestones) below.

(b) Before terminating this Agreement for cause, the Company shall give written notice to the Seller of the existence of one or more of the above conditions allowing termination for cause and of the Company's intention to exercise its termination rights if the condition is not corrected to the satisfaction of Company. Upon receipt of the Company's notice of intent to terminate for cause, the Seller shall have thirty (30) Days in which to correct the noted condition to the satisfaction of the Company.

(c) The Seller may terminate the Agreement if the Company, (i) by act or omission, materially breaches or defaults on any material covenant, condition or other provision of this Agreement, and fails to cure such breach or default within thirty (30) Days after written notice of such breach or default from the Seller, unless such breach or default cannot be cured within thirty (30) Days and the Company is making diligent efforts to cure such breach or default, provided, however, that if such breach or default is not cured within one hundred eighty (180) Days of such notice, the Seller may terminate this Agreement or (ii) due to a Force Majeure event is prevented from performing any material obligation under this Agreement for one hundred eighty (180) Days or longer.

(d) A Tier 2 Seller shall provide Company a minimum of three (3) months written notice prior to ceasing operations at the Facility for reasons other than Force Majeure events or such Seller shall be subject to liquidated damages equal to the highest three months of revenues received under this Agreement during the last twelve months prior to terminating operation, due and payable to the Company upon receipt of billing from the Company, and such other penalties as may be determined by the Commission.

11. Facility Development Milestones: (a) Seller agrees to develop the Facility in an expeditious manner to enable the Company to achieve its renewable energy and Feed-in Tariff program objectives. To assure reasonable performance by the Seller in developing the Facility in a timely manner, the Seller shall pay a reservation fee for a space in the Queue to the Company, based on the Design Capacity of the Facility. In addition, the Seller will provide appropriate security deposits, in amounts to be determined by the Company with the concurrence of the Independent Observer, in order to proceed through defined stages in the project development process. If Seller achieves Commercial Operation by the Commercial Operation Date, the reservation fee and security deposits will be returned to the Seller with the initial FIT electric energy payment made by the Company.

(b) In the event the Commercial Operation Date is not reached within the time period established by the Commission, the reservation fee and security deposits will be forfeited by the Seller to the Company and the Company may terminate this Agreement. Before terminating the Agreement, the Company shall give written notice to the Seller of the forfeiture of the reservation fee and security deposits and the Company's intention to exercise its termination rights under this Section. Upon receipt of the Company's notice of intent to terminate, the Seller shall have fifteen (15) Days to submit a written request for an extension to the date the Facility must be placed into Commercial Operation. In considering the extension request, the Company shall take into account the progress made by the Seller in developing the Facility and the number of other sellers waiting to execute Agreements, if any. The Company shall not unreasonably withhold such extension. Within ten (10) Days of receiving written notification of an extension of the allowed Commercial Operation Date, the Seller shall pay the Company an additional reservation fee in the same amount as that initially paid, and subject to the same refund and forfeiture provisions. In order to ensure only viable projects remain in the Queue, in no case shall the allowed *Commercial Operation Date* be extended for more than 180 Days.

12. Indemnification: (a) Seller's Indemnification Obligations. The Seller shall indemnify, defend and hold harmless the Company and its directors, officers, employees and agents (including but not limited to affiliates and contractors and their employees) from and against any and all liabilities, damages, losses, penalties, claims, demands, suits, costs, expenses (including attorneys' fees), and proceedings of every kind, including those for damage to the property or real property of any person or entity (including the Seller) and/or for injury to or death of any person (including the Seller's employees and agents)(collectively "Injury or Damage"), directly or indirectly arising out of or attributable to or in any manner connected with the engineering, design, location, construction, maintenance, interconnection, or parallel operation of the Facility with the Company System, including land restoration costs for which the Seller is responsible, if any, and/or directly or indirectly arising out of or

attributable to or in any manner connected with the breach of any of Seller's representations or warranties herein, except to the extent that such Injury or Damage is attributable to the gross negligence or willful misconduct of the Company.

(b) Company's Indemnification Obligations. The Company shall indemnify, defend and hold harmless the Seller and its directors, officers, employees and agents (including but not limited to affiliates and contractors and their employees) from and against any and all liabilities, damages, losses, penalties, claims, demands, suits, costs, expenses (including attorneys' fees), and proceedings of every kind, including those for damage to the property or real property of any person or entity (including the Company) and/or for injury to or death of any person (including the Company's employees and agents)(collectively "Injury or Damage"), directly or indirectly arising out of or attributable to or in any manner connected with the engineering, design, location, construction, maintenance, interconnection, or parallel operation of the Company System with the Facility, and/or directly or indirectly arising out of or attributable to or in any manner connected with the breach of any of the Company's representations or warranties herein, except to the extent that such Injury or Damage is attributable to the gross negligence or willful misconduct of the Seller.

(c) No Duty to Third Parties. Nothing in this Agreement shall create any duty to, any standard of care with reference to, or any liability to any person not a party to it.

(d) Seller's Compliance with Law. Any fines or other penalties incurred by Seller for noncompliance with any Laws shall not be reimbursed by Company but shall be the sole responsibility of Seller. Seller shall indemnify, defend and hold harmless Company from and against any and all liabilities, damages, losses, penalties, claims, demands, suits, costs, expenses, disbursements (including attorney's fees) and proceedings of any nature whatsoever suffered or incurred because of the failure of Seller to comply with any Laws.

(e) Seller As an Agency of the State.

(i) Notwithstanding the foregoing, where the Seller is an agency of the State of Hawaii (the "State"), the State shall be responsible for damages or injury caused by the State's agents, officers, and employees in the course of their employment to the extent that the State's liability for such damage or injury has been determined by a court or otherwise agreed to by the State. The State shall pay for such damage and injury to the extent permitted by law. The State shall use reasonable good faith efforts to pursue any approvals from the Legislature and the Governor that may be required to obtain the funding necessary to enable the State to perform its obligations or cover its liabilities hereunder. The State shall not request the Company to indemnify the State for, or hold the State harmless from, any claims for such damages or injury.

(ii) The Company shall be responsible for damages or injury caused by the Company, Company's agents, officers, and employees in the course of their employment to the extent that the Company's liability for such damage or injury has been determined by a court or otherwise agreed to by

the Company, and the Company shall pay for such damage and injury to the extent permitted by law. The Company shall not request the State to indemnify the Company for, or hold the Company harmless from, any claims for such damages or injury.

(f) Seller As an Agency of The Department of Defense (The "DOD").

Notwithstanding the foregoing, where the Seller is an agency of the DOD, neither Party hereto shall be responsible for loss or damage to the property of the other Party or property of others, or for death or for personal injuries to the other Party's officers, agents, servants, or employees, or to other persons, arising from or related to (i) the Company's initiation of a service interruption under this Agreement and /or (ii) the DOD's electric service being disconnected or reconnected by the Company and /or DOD pursuant to this Agreement and/or (iii) the parallel operation of the systems of the Parties hereto or incident to the use, operation, or maintenance with respect to the furnishing of service hereunder, except for such loss, damage, death or injuries caused by the DOD for which it may be liable under the Federal Tort Claims Act and in the case of the Company as may be caused by the negligence, wrongful act or omission of the Company, its agents, servants or employees; nor, except for matters for which it may be liable under the Federal Tort Claims Act, shall the DOD be responsible in any way for any damage or loss of profit suffered by the Company arising from or incident to such use, operation or maintenance.

13. Insurance: (a) Minimum Insurance Requirements. The Seller shall, at its own expense and during the FIT Term and any other time that the Facility is interconnected with the Company System, maintain in effect with a responsible insurance company authorized to do insurance business in Hawaii, the following insurance that will protect the Seller and the Company with respect to the Facility, the Seller's operations, and the Seller's interconnection with the Company System:

(i) Tier 1: A general liability policy covering bodily injury and property damage combined single limit of at least FIVE HUNDRED THOUSAND DOLLARS (\$500,000) for any occurrence.

(ii) Tier 2: A general liability policy covering bodily injury and property damage combined single limit of at least TWO MILLION DOLLARS (\$2,000,000) for any occurrence.

(b) Higher Limits. The Seller has responsibility to determine if higher limits are desired and purchased.

(c) Self-Insured Seller. If the Seller is considered to be self-insured it shall not be required to maintain any separate policy of insurance under this section of the Agreement. Notwithstanding the above, this shall in no event waive or otherwise release or limit the Seller's liabilities undertaken pursuant to this Agreement.

(d) Other Insurance Requirements. Seller's insurance shall name the Company as an additional insured, shall include contractual liability coverage for written contracts and agreements including this Agreement, and shall be non-cancelable and non-alterable without thirty (30) Days' prior written notice to the Company. "Claims made" policies are not acceptable. The adequacy of the coverage afforded by

the required insurance shall be subject to review by the Company from time to time, and if it appears in such review that risk exposures require an increase in the coverages and/or limits of this insurance, the Seller shall make such increase to that extent and any increased costs shall be borne by the Seller. The insurance required hereunder shall provide that it is primary with respect to the Seller and the Company. The Seller shall provide evidence of such insurance, including insurer's acknowledgement that coverage applies with respect to this Agreement, by providing certificates of insurance, or the Declaration page of a homeowners' insurance policy (for residential FIT facilities), to the Company within 30 Days of any change. Initially, certificates of insurance must be provided to the Company prior to executing this Agreement and any parallel interconnection. The Seller's indemnity and other obligations shall not be limited by the foregoing insurance requirements. Any deductible shall be the responsibility of the Seller.

(e) Notification. The Parties to this Agreement agree to promptly notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

14. Financial Compliance:

(a) Seller shall provide or cause to be provided to Company on a timely basis, as reasonably determined by Company, all information, including but not limited to information that may be obtained in any audit referred to below (the "Information"), reasonably requested by Company for purposes of permitting Company and Hawaiian Electric Industries, Inc. ("HEI") to comply with the requirements (initial and on-going) of (i) identifying variable interest entities and determining primary beneficiaries under the accounting principles of Financial Accounting Standards Board ("FASB") Accounting Standards Codification 810, Consolidation ("FASB ASC 810"), (ii) Section 404 of the Sarbanes-Oxley Act of 2002 ("SOX 404") and (iii) all clarifications, interpretations and revisions of and regulations implementing FASB ASC 810 and SOX 404 issued by the FASB, Securities and Exchange Commission, the Public Company Accounting Oversight Board, Emerging Issues Task Force or other governing agencies. In addition, if required by Company in order to meet its compliance obligations, Seller shall allow Company or its independent auditor, to audit, to the extent reasonably required, Seller's financial records, including its system of internal controls over financial reporting; provided that Company shall be responsible for all costs associated with the foregoing, including but not limited to Seller's reasonable internal costs. Company shall limit access to such Information to persons involved with such compliance matters and restrict persons involved in Company's monitoring, dispatch or scheduling of Seller and/or Facility, or the administration of the Agreement, from having access to such Information(unless approved in writing in advance, by Seller).

(b) If there is a change in circumstances during the term of the Agreement that would trigger consolidation of Seller's finances on to Company's balance sheet, and such consolidation is not attributable to Company's fault, then the Parties will take all commercially reasonable steps, including modification of the Agreement, to eliminate the consolidation, while preserving the economic "benefit of the bargain" to both Parties.

(c) Company shall, and shall cause HEI to, maintain the confidentiality of the Information as provided in this Section 14 (Financial Compliance). Company may share the Information on a confidential basis with HEI and the independent auditors and attorneys for HEI and Company. (Company, HEI, and their respective independent auditors and attorneys are collectively referred to in this Section 14 (Financial Compliance) as "Recipient.") If either Company, or HEI, in the exercise of their respective reasonable judgments, concludes that consolidation or financial reporting with respect to Seller and/or this Agreement is necessary, Company, and HEI each shall have the right to disclose such of the Information as Company or HEI, as applicable, reasonably determines is necessary to satisfy applicable disclosure and reporting or other requirements and give Seller prompt written notice thereof (in advance to the extent practicable under the circumstances). If Company or HEI disclose Information pursuant to the preceding sentence, Company and HEI shall, without limitation to the generality of the preceding sentence, have the right to disclose Information to the Commission and the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs of the State of Hawaii ("Consumer Advocate") in connection with the Commission's rate making activities for Company and other HEI affiliated entities, provided that, if the scope or content of the Information to be disclosed to the Commission exceeds or is more detailed than that disclosed pursuant to the preceding sentence, such Information will not be disclosed until the Commission first issues a protective order to protect the confidentiality of such Information. Neither Company nor HEI shall use the Information for any purpose other than as permitted under this Section 14 (Financial Compliance).

(d) In circumstances other than those addressed in the immediately preceding paragraph, if any Recipient becomes legally compelled under applicable law or by legal process (e.g., deposition, interrogatory, request for documents, subpoena, civil investigative demand or similar process) to disclose all or a portion of the Information, such Recipient shall undertake reasonable efforts to provide Seller with prompt notice of such legal requirement prior to disclosure so that Seller may seek a protective order or other appropriate remedy and/or waive compliance with the terms of this Section 14 (Financial Compliance). If such protective order or other remedy is not obtained, or if Seller waives compliance with the provisions at this Section 14 (Financial Compliance), Recipient shall furnish only that portion of the Information which it is legally required to so furnish and to use reasonable efforts to obtain assurance that confidential treatment will be accorded to any disclosed material.

Section 14 (Financial Compliance) shall not extend to any portion(s) of the Information which (i) was known to such Recipient prior to receipt, or (ii) without the fault of such Recipient is available or becomes available to the general public, or (iii) is received by such Recipient from a third party not bound by an obligation or duty of confidentiality.

15. Assignment: This Agreement may not be assigned by either the Company or the Seller absent the written consent of the other Party. Such consent shall not be unreasonably withheld. The Parties agree that any assignment in contravention of this Section 15 (Assignment) is hereby deemed null and void.

16. Hawaii Public Utilities Commission: This Agreement shall, at all times, be subject to such changes or modifications by the Commission as said Commission, may, from time to time, direct in the exercise of its jurisdiction.

17. Force Majeure: (a) If either Party shall be wholly or partially prevented from performing any of its obligations under this Agreement by reason of or through strikes, lightning, rain, earthquake, wind, riots, fire, flood, invasion, insurrection, lava flow or volcanic activity, tidal wave, civil commotion, the order of any court, judge or civil authority, war, any act of God or the public enemy, or any other similar cause reasonably beyond its exclusive control and not attributable to its neglect ("Force Majeure"), then and in any such event, either Party shall be excused from whatever performance is prevented by such event to the extent so prevented, and either Party shall not be liable for any damage or loss resulting therefrom.

(b) "Force Majeure" does not include:

- (i) any acts or omissions of any third party, including, without limitation, any vendor, materialman, customer, or supplier of Seller, unless such acts or omissions are themselves excused by reason of Force Majeure;
- (ii) any full or partial curtailment in the electric output of the Facility that is caused by or arises from a mechanical or equipment breakdown or other mishap or events or conditions attributable to normal wear and tear or flaws, unless such mishap is caused by Force Majeure;
- (iii) Seller's inability to obtain Permits or approvals of any type for the construction, operation, or maintenance of Facility;
- (iv) litigation or administrative or judicial action pertaining to this Agreement, the Site the Facility, the acquisition, maintenance or renewal of financing or any Permits, or the design, construction, maintenance or operation of the Facility or the Company System; or
- (v) any full or partial curtailment in the delivery of the output of the Seller or of the ability of the Company to accept output from the Seller which is caused by any third party including, without limitation, any vendor or supplier of the Seller or the Company, except to the extent due to Force Majeure.

18. Representations and Warranties: (a) The Seller represents and warrants as follows:

- (i) The Seller has all necessary right, power and authority to execute, deliver and perform this Agreement; and
- (ii) The execution, delivery and performance of this Agreement by the Seller will not result in a willful violation of any law or regulation of any governmental authority, or conflict

with, or result in a breach of, or cause a default under, any agreement or instrument to which the Seller is a party or by which it is bound.

(b) The Company represents and warrants as follows:

- (i) The Company has all necessary right, power and authority to execute, deliver and perform this Agreement; and
- (ii) The execution, delivery and performance of this Agreement by the Company will not result in a willful violation of any law or regulation of any governmental authority, or conflict with, or result in a breach of, or cause a default under, any agreement or instrument to which the Company is a party or by which it is bound.

19. Dispute Resolution:

(a) Management Meeting. Before submitting any claims, controversies or disputes (“Dispute(s)”) under this Agreement to the Dispute Resolution Procedure set forth herein, the presidents, vice presidents, or authorized delegates from both Seller and Company having full authority to settle the Dispute(s), shall personally meet in Hawaii and attempt in good faith to resolve the Dispute(s) (the “Management Meeting”).

(b) Arbitration. If any Disputes remain unresolved after such Management Meeting concludes, the Parties agree to submit any such Dispute(s) to binding arbitration in Honolulu, Hawaii pursuant to the administration by, and in accordance with the Arbitration Rules, Procedures, and Protocols of, Dispute Prevention & Resolution, Inc. then in effect (“Arbitration Rules”). Capitalized and otherwise undefined terms in this Section 19 (Dispute Resolution) shall have the meanings set forth in the Arbitration Rules. The award of the arbitrator(s) is binding upon the Parties and judgment upon the award rendered may be entered in any court of competent jurisdiction. In the event that Dispute Prevention & Resolution, Inc. or its successor is unable or unwilling to administer the arbitration at the time the dispute is submitted for binding arbitration, the Parties agree to submit any such Dispute(s) to binding arbitration in Honolulu, Hawaii pursuant to the administration by, and in accordance with the Commercial Arbitration Rules of the American Arbitration Association. All references herein to the “Arbitration Rules” shall then be deemed to be references to the Commercial Arbitration Rules or the provisions thereof most similar to the referenced provision of the Arbitration Rules.

(c) Procedures for Appointing Arbitrator(s). The Parties hereby agree that arbitrator(s) shall be appointed according to the following procedure, notwithstanding any contrary or inconsistent provision of the Arbitration Rules.

- (i) Single Arbitrator. Within 20 Days of the initiation of arbitration and the receipt by Respondent of the Demand for Arbitration, the Parties shall attempt to agree on a single arbitrator.

(ii) Three-Arbitrator Panel. Should the Parties fail to agree on a single arbitrator within that 20-Day period, each Party may appoint one arbitrator within 14 Days thereafter pursuant to the Arbitration Rules. If any Party does not appoint an arbitrator within that 14-Day period, Dispute Prevention & Resolution, Inc. shall appoint one or both of the arbitrator(s), as appropriate. Within 20 Days of the appointment of the second arbitrator, the two appointed arbitrators shall attempt to agree upon the appointment of a third arbitrator. If the two appointed arbitrators fail to agree upon the appointment of the third arbitrator within this 20-Day period, Dispute Prevention & Resolution, Inc. shall appoint the third arbitrator.

(d) Authority of the Arbitrator(s). Notwithstanding anything herein or in the Arbitration Rules to the contrary, all documents shall be produced and all depositions shall be taken in Honolulu, Hawaii, and that any deposition fees and travel expenses of all hearing witnesses and deponents named by, affiliated with or formerly affiliated with a Party or any of its affiliates, or its affiliate's affiliate, shall be borne by that Party. The Parties warrant they shall cause such documents, witnesses and deponents to appear in Honolulu, Hawaii notwithstanding any objection as to the jurisdiction of the arbitration panel, the location of the arbitration, or lack of privity with a party or that the witness is not a party to the Agreement or to the arbitration, and the arbitrator(s) shall have no power to order to the contrary. Notwithstanding anything herein or in the Arbitration Rules to the contrary, the authority of the arbitrator(s) in rendering the award is limited to the interpretation and/or application of the terms of this Agreement and to ordering any remedy allowed by this Agreement. The arbitrator(s) shall have no power to change any term or condition of this Agreement, deprive any Party of a remedy expressly provided hereunder, or provide any right or remedy that has been excluded hereunder. Notwithstanding anything herein or in the Arbitration Rules to the contrary, any Party who contends that the award was in excess of the authority of the arbitrator(s) as set forth herein may seek judicial relief in the Circuit Court of the State of Hawaii for the circuit in which the arbitration hearing was held, provided that such judicial proceeding is initiated within 30 Days of the award and not otherwise.

(e) No Punitive or Exemplary Damages. Notwithstanding anything herein or in the Arbitration Rules to the contrary, and pursuant to Hawaii Revised Statutes § 658A-4, the Parties hereby waive any and all claims for punitive or exemplary damages with respect to any and all Dispute(s).

20. Regulatory Compliance:

(a) Tier 2 Sellers shall file in Docket No. 2008-0273, subject to protective order, the following information for each Facility, within thirty (30) days of the Commercial Operation Date and annually thereafter.

- (i) The cost of design, permitting, and construction costs, including labor and materials costs of the Facility;
- (ii) Financing or capital cost;
- (iii) Land cost or actual cost of Site acquisition;
- (iv) Interconnection and metering costs incurred by the Seller;

- (v) Other project costs incurred in developing and constructing the Facility;
 - (vi) Tax credits, rebates, incentives received and applied to the project development cost;
 - (vii) Maintenance and operation labor and non-labor costs;
 - (viii) Fuel supply costs (for biomass and biogas projects);
 - (ix) Monthly land or leases costs for the Site; and
 - (x) Other operations and maintenance costs.
- (b) Additionally, Tier 2 Sellers shall file an annual report with the Commission in Docket No. 2008-0273, no later than January 31, of each year, which contains the following information: (i) annual electric energy production in kWh; and (ii) annual operating costs, including operations and maintenance costs, lease expenses, insurance, and property taxes.

21. Miscellaneous:

- (a) Amendments. Any amendment or modification of this Agreement or any part hereof shall not be valid unless in writing and signed by the Parties. Any waiver hereunder shall not be valid unless in writing and signed by the Party against whom waiver is asserted.
- (b) Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors, legal representatives, and permitted assigns.
- (c) Notices. Any written notice provided hereunder shall be delivered personally or sent by registered or certified first class mail, with postage prepaid, to the other Party at the following address:

Company:

1) By Mail:

Attn: _____

2) Delivered:

Attn: _____

3) By facsimile:

(808) ____ - ____

Seller:

1) By Mail:

Attn: _____

2) Delivered:

Attn: _____

3) By facsimile:

(808) ____ - ____

Notice sent by mail shall be deemed to have been given on the date of actual delivery or at the expiration of the fifth Day after the date of mailing, whichever is earlier. Any Party hereto may change its address for written notice by giving written notice of such change to the other Party hereto.

Any notice delivered by facsimile must be followed by personal or mail delivery and the effective date of such notice shall be the date of personal delivery or, if by mail, the earlier of the actual date of delivery or the expiration of the fifth day after the date of mailing.

- (d) Effect of Section and Appendix Headings. The headings or titles of the several sections and appendices hereof are for convenience of reference and shall not affect the construction or interpretation of any provision of this Agreement.
- (e) Non-Waiver. No delay or forbearance of the Company or the Seller in the exercise of any remedy or right will constitute a waiver thereof, and the exercise or partial exercise of a remedy or right shall not preclude further exercise of the same or any other remedy or right.

- (f) Relationship of the Parties. Nothing in this Agreement shall be deemed to constitute either Party hereto as partner, agent or representative of the other Party or to create any fiduciary relationship between the Parties. The Seller does not hereby dedicate any part of the Facility to serve the Company, the Company's customers or the public.
- (g) Entire Agreement. This Agreement, including all Appendices, constitutes the entire understanding and agreement between the Parties.
- (h) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Hawaii applicable to contracts wholly made and to be performed within the State of Hawaii without giving effect to the principles thereof with respect to conflicts of law. Each Party irrevocably submits to the sole and exclusive jurisdiction of the state and federal courts of the State of Hawaii, situated in the judicial circuit in which the Facility is located. Each Party irrevocably consents to the exercise of personal jurisdiction over each of the Parties by such courts and waives any right to plead, claim or allege that Hawaii is an inconvenient forum.
- (i) Limitations. Nothing in this Agreement shall limit the Company's ability to exercise its rights as specified in the Company Tariff as filed with the Commission, or as specified in General Order No. 7 of the Commission's Standards for Electric Utility Service in the State of Hawaii, as either may be amended from time to time.
- (j) Further Assurances. Each of the Parties shall from time to time and at all times do such further acts and deliver all such further documents and assurances as shall be reasonably necessary fully to perform and carry out this Agreement.
- (k) Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same agreement.
- (l) Definitions. Capitalized terms used in this Agreement not otherwise defined in the context in which they first appear are defined in Appendix A (Definitions) to this Agreement.
- (m) Severability. If any term or provision of this Agreement, or the application thereof to any person, entity or circumstances is to any extent invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons, entities or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.
- (n) Settlement of Disputes. Except as otherwise expressly provided, any dispute or difference arising out of this Agreement or concerning the performance or the non-performance by either

Party of its obligations under this Agreement shall be determined in accordance with the dispute resolution procedures set forth in Section 19 (Dispute Resolution) of this Agreement.

- (o) Environmental Credits. To the extent not prohibited by law, any Environmental Credit shall be the property of the Company; provided, however, that such Environmental Credits shall be to the benefit of the Company's ratepayers in that the value must be credited "above the line". Seller shall use all reasonable efforts to ensure such Environmental Credits are vested in the Company, and shall execute all documents, including, but not limited to, documents transferring such Environmental Credits, without further compensation; provided, however, that the Company agrees to pay for reasonable costs associated with such efforts and/or documentation.
- (p) Appendices. Each Appendix is an essential and necessary part of this Agreement.
- (q) Patents. Seller agrees that in fulfilling its responsibilities under this Agreement, it will not use any process, program, design, device or material that infringes on any United States patent. Seller agrees to indemnify, defend and hold harmless the Company from and against all losses, damages, claims, fees and costs, including but not limited to reasonable attorneys' fees and costs, arising from or incidental to any suit or proceeding brought against the Company for patent infringement arising out of Seller's performance under this Agreement.
- (r) Notice of Revisions of Schedule FIT. The Company shall serve the Seller notice of any proposed revisions to its Schedule FIT that it files with the Commission within five (5) business days after the proposed revision is filed with the Commission.
- (s) Survival. The rights and obligations that are intended to survive a termination of this Agreement are all of those rights and obligations that arise from Seller's or Company's covenants, agreements, representations, and warranties applicable to, or to be performed, at or during any time prior to or as a result of the termination of this Agreement, including but not limited to Section 12 (Indemnification), Section 13 (Insurance), Section 18 (Representations and Warranties), Section 19 (Dispute Resolution), Section 21 (Miscellaneous).

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the latter of the two dates set forth below.

SELLER

By: _____
Name: _____
Title: _____
Date: _____

COMPANY

By: _____
Name: _____
Title: _____
Date: _____

SHEET NO. XX
Effective

By: _____

Name: _____

Title: _____

Date: _____

APPENDIX A

DEFINITIONS

The following capitalized terms used in the Agreement shall have the meanings set forth below:

Agreement: Has the meaning set forth in the preamble.

Arbitration Rules: Has the meaning set forth in Section 19(b) (Arbitration).

Avoided Energy Cost Data: Data that is filed with the Commission pursuant to Subchapter 3, Rule 6-74-17(b) of the Commission's Standards, as may be amended from time to time or as may be superseded by applicable laws, rules or Commission orders.

Base Load Unit: A unit that is normally on-line twenty-four (24) hours a day. This includes any unit that is scheduled to be on-line continuously for a given day because a unit which is normally a Base Load Unit is on maintenance or otherwise temporarily out of service.

Commission: Has the meaning set forth in Section 3 (Sale of Electric Energy by the Company to the Seller).

Company: Has the meaning set forth in the preamble.

Company's Dispatch: The Company's sole and absolute right to control, from moment to moment, through supervisory equipment, or otherwise, and in accordance with Good Engineering and Operating Practices in the electric utility industry, the rate of delivery of energy offered by the Seller to the Company, subject to the operating constraints of Facility and as permitted under this Agreement.

Company System: The electric system owned and operated by the Company (to include any non-utility owned facilities) consisting of power plants, transmission and distribution lines, and related equipment for the production and delivery of electric power to the public.

Company System Operator: The authorized representative of the Company who is responsible for carrying out Company's Dispatch.

Company Tariff: The entire body of rates, charges, definitions and rules including those services contained in special contracts and supplemental tariffs adopted and filed by the Company as set forth herein and authorized by the Commission.

Commercial Operation: Shall mean the initial delivery of electric energy under this Agreement from the Facility to the Company.

Commercial Operation Date: Has the meaning set forth in Section 2(a) (Purchase of Electric Energy by the Company; Billing and Payment).

Consumer Advocate: Has the meaning set forth in Section 14 (Financial Compliance)

Day: A calendar day.

Design Capacity - The capacity of the eligible renewable generator in kW as established by the manufacturer that is available for use at the Facility to meet customer load and/or exported to the Company System for sale to Company under the Schedule FTT. Company will use either the nameplate rating of the Facility if no inverter is used, or the inverter rating if the Facility is inverter based.

Dispute: Has the meaning set forth in Section 19(a) (Management Meeting).

DOD: Has the meaning set forth in Section 12 (Indemnification) of this Agreement.

Environmental Credits: Any environmental credit, offset, or other benefit allocated, assigned or otherwise awarded by any governmental or international agency to the Company or the Seller based in whole or in part on the fact that the Facility is a non-fossil fuel facility. Such Environmental Credits shall include, but not be limited to, emissions credits, including credits triggered because such Facility does not produce carbon dioxide when generating electric energy, or any renewable energy credit, but in all cases shall not mean tax credits.

Execution Date: Shall have the meaning set forth in Section 9 (Term) of this Agreement.

Facility: Seller's (1) renewable energy facility described in Appendix B-1 (Description of Facility) that is the subject of this Agreement and is classified as an eligible resource under Hawaii's Renewable Portfolio Standards Statute (codified as Hawaii Revised Statutes (HRS) 269-91 through 269-95 ("RPS Law") and the provisions of the Commission's Decision and Order issued September 25, 2009 in Docket No. 2008-0273, (2) the Seller-Owned Interconnection Facilities, (3) the Site and (4) all equipment, devices, associated appurtenances owned, controlled, operated and managed by Seller in connection with, or to facilitate, the production, generation, transmission, delivery or furnishing of electric energy by Seller to Company and required to interconnect with the Company System.

FASB: Has the meaning set forth in Section 14 (Financial Compliance) of this Agreement.

FASB ASC 810: Has the meaning set forth in Section 14 (Financial Compliance) of this Agreement.

Federal Government Entities: Is an entity in the Executive branch of government (by way of example and not limitation, Department of the Navy or Department of the Army).

Federal Tort Claims Act: 28 U.S.C. 2671 et seq.; administrative rules at 28 C.F.R. Part 14. The FTCA permits persons to sue the government of the United States in federal court for money damages, for injury or loss of property, or personal injury or death caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his employment.

FIT Term: Has the meaning set forth in Section 9 (Term) of this Agreement.

Force Majeure: Has the meaning set forth in Section 17 (Force Majeure) of this Agreement.

Good Engineering and Operating Practices: The practices, methods and acts engaged in or approved by a significant portion of the electric utility industry for similarly situated U.S. facilities that at a particular time, in the exercise of reasonable judgment in light of the facts known or that reasonably should be known at the time a decision is made, would be expected to accomplish the desired result in a manner consistent with law, regulation, reliability, safety, environmental protection, economy and expedition. With respect to the Facility, Good Engineering and Operating Practices include, but are not limited to, taking reasonable steps to ensure that:

- (1) Adequate materials, resources and supplies, including fuel, are available to meet the Facility's needs under normal conditions and reasonably anticipated abnormal conditions;
- (2) Sufficient operating personnel are available and are adequately experienced and trained to operate the Facility properly, efficiently and within manufacturer's guidelines and specifications and are capable of responding to emergency conditions;
- (3) Preventive, routine and non-routine maintenance and repairs are performed on a basis that ensures reliable long-term and safe operation, and are performed by knowledgeable, trained and experienced personnel utilizing proper equipment, tools, and procedures;
- (4) Appropriate monitoring and testing is done to ensure equipment is functioning as designed and to provide assurance that equipment will function properly under both normal and emergency conditions; and
- (5) Equipment is operated in a manner safe to workers, the general public and the environment and in accordance with equipment manufacturer's specifications, including, without limitation, defined limitations such as steam pressure, temperature, moisture content, chemical content, quality of make-up water, operating voltage, current, frequency, rotational speed, polarity, synchronization, control system limits, etc.

Governmental Authorities: Any federal, state, local or municipal governmental body; any governmental, quasi-governmental, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or power; or any court or governmental tribunal.

Governor: The Governor of the State of Hawaii.

HEI: Has the meaning set forth in Section 14 (Financial Compliance) of the Agreement.

Independent Observer: The independent third party retained by the Company and approved by the Commission to oversee the initial development and subsequent administration of the Company's queuing and interconnection procedures.

Injury or Damage: Has the meaning set forth in Section 12 (Indemnification) of this Agreement.

Interconnection Standards: Has the meaning set forth in the Company Tariff, Rule 14, Section H, Appendix I.

Legislature: The Legislature of the State of Hawaii.

Management Meeting: Has the meaning set forth in Section 19(a) (Management Meeting).

Party or Parties: Has the meaning set forth in the preamble.

Permits: All permits, licenses, approvals, certificates, entitlements and other authorizations issued by Governmental Authorities required for the construction, ownership and operation of the Facility, and all amendments, modifications, supplements, general conditions and addenda thereto.

Point of Interconnection: The point of delivery of electric energy and/or capacity supplied by Seller to Company where the Facility interconnects with the Company System.

PUC (Public Utilities Commission): The Public Utilities Commission of the State of Hawaii.

PURPA: Public Utility Regulatory Policies Act of 1978 (P.L. 95-617) as amended from time to time and as applied in Hawaii by the Commission.

Qualifying Facility: As defined under PURPA and the regulations issued thereunder.

Queue: The prioritized list of project applications for the Company's Feed-in Tariff program selected in accordance with procedures approved by the Commission.

Renewable Portfolio Standards ("RPS"): The Hawaii law that mandates that the Company and its subsidiaries generate or purchase certain amounts of their net electric energy sales over time from qualified renewable resources.

Schedule FIT: Has the meaning set forth in the preamble.

Schedule FIT Agreement: The standard Schedule FIT agreement provided in Appendix I of the Schedule FIT Tariff.

Seller: Has the meaning set forth in the preamble.

Seller-Owned Interconnection Facilities: Has the meaning set forth in Appendix B (Interconnection Requirements).

Site: The parcel of real property on which the Facility will be constructed and located, including any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of the Facility.

SOX 404: Has the meaning set forth in Section 14 (Financial Compliance) of this Agreement

State: Has the meaning set forth in Section 12(e) (Seller As An Agency of the State).

Third Party: Any person or entity other than the Company or the Seller, and includes, but is not limited to, any subsidiary or affiliate of the Seller.

Tier 1: Has the meaning set forth in the Commission's Decision and Order issued on September 25, 2009 in Docket No. 2008-0273.

Tier 2: Has the meaning set forth in the Commission's Decision and Order issued on September 25, 2009 in Docket No. 2008-0273.

APPENDIX B

INTERCONNECTION REQUIREMENTS

1. Company-Owned Interconnection Facilities:

- a. General. The Company agrees to furnish, install, operate and maintain such interconnection facilities on its side of the point of interconnection with the Facility as required for parallel operation with the Facility and as more fully described in Appendix B-2 ("Company-Owned Interconnection Facilities"). All Company-Owned Interconnection Facilities shall be the property of the Company. Where portions of the Company-Owned Interconnection Facilities are located on the Seller's premises, the Seller shall provide, at no expense to the Company, a suitable location for and access to all such equipment. If a 120/240 Volt power source or sources are required, the Seller shall provide these at no expense to the Company.

b. Seller Payments for Company-Owned Interconnection Facilities:

- (i) The Seller agrees to pay to the Company a reasonable non-refundable contribution for the Company's investment in the Company-Owned Interconnection Facilities described in Appendix B-2 (Company-Owned Interconnection Facilities), subject to the terms and conditions included in Appendix B-2 (Company-Owned Interconnection Facilities), and to pay for other reasonable interconnection costs as determined by the Company. The interconnection costs will not include the cost of an initial technical screening of the impact of the Facility on the Company System, but will include the actual cost (or such lesser amount as the Company may specify to facilitate the processing of interconnection requests for similarly situated facilities) of additional technical study for the Facility, if additional technical study is conducted.

(ii) For Seller That Is an Agency of The DOD.

The following provision applies only to a Seller that is an agency of the DOD. Notwithstanding the foregoing, the DOD shall pay for all costs associated with the Company's investment in the Company-Owned Interconnection Facilities and other reasonable interconnection costs by means of a modification to the existing electric service contract. The contract modification shall be executed prior to effectuating this Agreement.

2. Seller-Owned Interconnection Facilities.

- a. The Seller shall furnish, install, operate and maintain interconnection facilities (such as circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes) designated by or acceptable to the Company as suitable for parallel operation of the Facility with the Company System ("Seller-Owned Interconnection Facilities"). Such Seller-Owned Interconnection Facilities shall be accessible at all times to authorized Company personnel.
- b. The Seller shall comply with the Company's Interconnection Standards as defined in this Agreement. If a conflict exists between the Interconnection Standards and this Agreement, this Agreement shall control.
- c. Prior to executing this Agreement, a (i) single-line diagram, (ii) relay list, trip scheme and settings of the Facility, (iii) Facility Equipment List, and (iv) three-line diagram (if the Facility's capacity is greater than or equal to 30 kW), which identify the circuit breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices and schemes, shall, after having obtained prior consent from the Company, be attached to this Appendix B (Interconnection Requirements). The single-line diagram shall include pertinent information regarding operation, protection, synchronizing, control, monitoring and alarm requirements. The single-line diagram and three-line diagram shall expressly identify the point of interconnection of the Facility to the Company System. The relay list, trip scheme and settings shall include all protection, synchronizing and auxiliary relays that are required to operate the Facility in a safe and reliable manner. The three-line diagram shall show potential transformer and current transformer ratios, and details of the Facility's configuration, including relays, meters, and test switches.

3. Approval of Design Drawings. If the Facility's capacity is greater than or equal to 30 kW, Seller shall obtain the approval of a professional electrical engineer registered in the State of Hawaii for the single-line diagram, relay list, trip scheme and settings of the Facility, and three-line diagram prior to submitting such drawings and documents to the Company. Such approval shall be indicated by such electrical engineer's professional seal on all drawings and documents
4. Point of Interconnection. The Point of Interconnection is shown on the single-line diagram and three-line diagram (provided by the Seller and reviewed by the Company) which are attached to Appendix B-2 (Seller-Owned Interconnection Facilities) (provided that the three-line diagram is not required if the Facility's capacity is less than 30 kW).
5. Testing, Records and Operating Procedures. The Seller agrees to test the Facility, to maintain operating records, and to follow such operating procedures, as may be specified by the Company to protect the Company System from damages resulting from the parallel operation of the

Facility, including such testing, records and operating procedures as more fully described in below:

- a. The Company may require periodic reviews of the maintenance records, and available operating procedures and policies of the Facility.
- b. The Seller must separate the Facility from the Company System whenever requested to do so by the Company System Operator pursuant to Section 5 (Personnel and Company System Safety) of the Agreement and Section 6 (Continuity of Service) of the Agreement, and Section 11 (Disconnection of Facility for Company Reasons) of this Appendix B (Interconnection Requirements). It is understood and agreed that at times it may not be possible for the Company to accept electric energy due to temporary operating conditions on the Company System, and these periods shall be specified by the Company System Operator. Notice shall be given in advance when these are scheduled operating conditions.
- c. Logs shall be kept by the Seller for information on unit availability including reasons for planned and forced outages; circuit breaker trip operations, relay operations, including target initiation and other unusual events. The Company shall have the right to review these logs, especially in analyzing system disturbances.

6. Changes to the Facility, Operating Records, and Operating Procedures.

- a. The Seller agrees that no material changes or additions to the Facility as reflected in the single-line diagram, relay list, trip scheme and settings of the Facility, Facility Equipment List, and three-line diagram (if the Facility's capacity is greater than or equal to 30 kW), shall be made without having obtained prior written consent from the Company.
- b. As a result of the observations and inspections of the Facility (including but not limited to relay list, trip scheme and settings) and the performance of the verification tests, if any changes in or additions to the Facility, operating records, and operating procedures and policies are required by the Company, the Company shall specify such changes or additions to the Seller in writing, and the Seller shall, as soon as practicable, but in no event later than thirty (30) Days after receipt of such changes or additions, respond in writing, either noting agreement and action to be taken or reasons for disagreement. If the Seller disagrees with the Company, it shall note alternatives it will take to accomplish the same intent, or provide the Company with a reasonable explanation as to why no action is required by Good Engineering and Operating Practices.

7. Verification Testing.

- a. Upon initial parallel operation of the Facility, or any time interface hardware or software is changed, a verification test of Seller-Owned Interconnection Facilities shall be performed by Seller. A qualified individual, hired or employed by the Seller, shall perform the verification testing in accordance with the manufacturer's published test procedure. Qualified individuals include professional engineers, factory trained and certified technicians, and licensed electricians with experience in testing protective equipment.
- b. Verification testing shall be performed every four years. All verification tests prescribed by the manufacturer shall be performed. If wires must be removed to perform certain tests, each wire and each terminal shall be clearly and permanently marked. The Seller shall maintain verification test reports for inspection by the Company. Additionally, all inverters shall be verified once per year as follows: the Seller shall operate the load break disconnect switch and verify the Facility automatically shuts down and does not reconnect with the Company System until the Company System continuous normal voltage and frequency have been maintained for a minimum of 5 minutes. The Seller shall maintain a log of these operations for inspection by the Company.
- c. Any system that depends upon a battery for trip power shall be checked once per month for proper voltage. Once every four (4) years the battery shall either be replaced or have a discharge test performed. The Seller shall maintain a log of these operations for inspection by the Company.
- d. Tests and battery replacements as specified in this Section 7 (Verification Testing) of Appendix B (Interconnection Requirements) shall be at the Seller's expense.

8. Company's Right to Inspect.

- a. The Company may, in its discretion and upon reasonable notice not to be less than 24 hours (unless otherwise agreed to by the Company and the Seller), observe the construction of the Facility (including but not limited to relay settings and trip schemes) and the equipment to be installed therein.
- b. Within fourteen Days after receiving a written request from the Seller to begin producing electric energy in parallel with the Company System, the Company may inspect the Facility (including but not limited to relay settings and trip schemes) and observe the performance of the verification testing. The Company may accept or reject the request to begin producing electric energy based upon the inspection or verification test results.
- c. If the Company does not perform an inspection of the Facility (including but not limited to relay settings and trip schemes) and observe the performance of verification testing within the fourteen-Day period, the Seller may begin to produce electric energy after

certifying to the Company that the Facility has been tested in accordance with the verification testing requirements and has successfully completed such tests. After receiving the certification, the Company may conduct an inspection of the Facility (including but not limited to relay settings and trip schemes) and make reasonable inquiries of the Seller, but only for purposes of determining whether the verification tests were properly performed. The Seller shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

- d. The Company may, in its discretion and upon reasonable notice not to be less than 24 hours (unless an apparent safety or emergency situation exists which requires immediate inspection to resolve a known or suspected problem), inspect the Facility (including but not limited to relay settings and trip schemes) and its operations (including but not limited to the operation of control, synchronizing, and protection schemes) after the Facility commences operations.

9. Commencement of Producing Electric Energy in Parallel: After this Agreement is executed, and the Facility and the Company-Owned Interconnection Facilities are completed, the Facility may be operated in parallel with the Company System, provided that the Seller has satisfied the conditions in Section 8 (Company's Right to Inspect) of this Appendix B (Interconnection Requirements).

10. Disconnection of Facility for Company Reasons:

- (a) Upon providing reasonable notice (generally not to be less than ten (10) business days for scheduled work), the Company may require the Seller to temporarily disconnect the Facility from the Company System when necessary for the Company to construct, install, maintain, repair, replace, remove, investigate, test or inspect any of its equipment or other Sellers' equipment or any part of the Company System. If the Company determines that such disconnection is necessary because of an unexpected system emergency, forced outage, operating conditions on the Company Systems, or compliance with Good Engineering and Operating Practices as determined by the Company, the Company will immediately attempt to notify the Seller or the Seller's designated representatives in person, by telephone, by electronic mail, or by facsimile, of the need to disconnect the Facility. Unless the emergency condition requires immediate disconnection as determined by the Company, the Company shall allow sufficient time for the Seller to manually disconnect the Facility.
- (b) The Facility shall not energize a de-energized utility line under any circumstances, but may operate its Facility isolated from the Company System with an open tie point in accordance with Section 4.i of Appendix I to Company Tariff, Rule 14, Section H.

- (c) Following the completion of work and/or rectification of the emergency conditions by the Company, the Company shall provide authorization for the Seller to reset the Seller's service breaker, if open, as soon as practicable and shall provide, within fifteen (15) business days or such other period as is mutually agreed upon in writing by the Company and the Seller, written documentation of the occurrence and nature of the Company's work and/or emergency condition, and of the disconnection of the Facility.
- (d) The Company shall take reasonable steps to minimize the number and duration of such disconnections.
- (e) The disconnection of the Facility under this Section 10 (Disconnection of Facility for Company Reasons) shall not be subject to standby service charges under the Company's Schedule SS Standby Service tariff.
- (f) The Company may disconnect the Seller from the Company System for failure by the Seller to disconnect the Facility under this Section 10 (Disconnection of Facility for Company Reasons), until such time that the Company's work or the system condition has been corrected and the normal system condition has been restored.

11

Prevention of Interference:

- (a) The Seller shall not operate equipment that superimposes a voltage or current upon the Company System that interferes with the Company's operations, service to the Company's customers, or the Company's communication facilities. Such interference shall include, but not be limited to, overcurrent, voltage imbalance, and abnormal waveforms. If such interference occurs, the Seller must diligently pursue and take corrective action at its own expense after being given notice and reasonable time to do so by the Company. If the Seller does not take timely corrective action, or continues to operate the equipment causing interference without restriction or limit, the Company may, without liability, disconnect the Seller's equipment from the Company System.
- (b) For Seller That Is An Agency Of The DOD.

This provision applies only to a Seller that is an agency of the DOD. The DOD shall not operate equipment that superimposes a voltage or current upon the Company System that interferes with the Company's operations, service to the Company's customers, or the Company's communication facilities. Such interference shall include, but not be limited to, overcurrent, voltage imbalance, and abnormal waveforms. If such interference occurs, the DOD must diligently pursue and take corrective action at its own expense after being given notice and reasonable time to do so by the Company. If the DOD does not take

timely corrective action, or continues to operate the equipment causing interference without restriction or limit, the Company may disconnect the DOD's equipment from the Company System.

12. Avoidance of adverse system conditions.

The Facility shall be designed, installed, operated and maintained so as to prevent or protect against adverse conditions on the Company System that can cause electric service degradation, equipment damage, or harm to persons, such as:

- (a) Unintended islanding.
- (b) Inadvertent and unwanted re-energization of a Company dead line or bus.
- (c) Interconnection while out of synchronization.
- (d) Overcurrent.
- (e) Voltage imbalance.
- (f) Ground faults.
- (g) Generated alternating current frequency outside of permitted safe limits.
- (h) Voltage outside permitted limits.
- (i) Poor power factor or reactive power outside permitted limits.
- (j) Abnormal waveforms.

13. Specification of protection, synchronizing and control requirements. The Seller shall provide the design drawings, operating manuals, manufacturer's brochures/instruction manual and technical specifications, manufacturer's test reports, bill of material, protection and synchronizing relays and settings, and protection, synchronizing, and control schemes for the Facility to the Company for its review, and the Company shall have the right to specify the protection and synchronizing relays and settings, and protection, synchronizing and control schemes that affect the reliability and safety of operation and power quality of the Company System with which the Facility is interconnected ("Facility Protection Devices/Schemes"). After the implementation of the protection and synchronizing relays and settings, and protection, synchronizing and control schemes, the Company may require changes in the protection and synchronizing relays and settings, and protection, synchronizing and control schemes, when required by the Facility's or system operations, at the Seller's expense.

14. Facility protection. The Seller is solely responsible for providing adequate protection for the Facility.

APPENDIX B-1

DESCRIPTION OF FACILITY

Section 1. Applicant Information

Seller

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone

(Daytime): _____ (Evening): _____
Area Code Number Area Code Number

E-mail: _____ Account Number: _____

Facility Location (if different from above): _____

Facility Location Tax Map Key Number: _____

Section 2. Generator Qualifications

Is Generator powered from a Nonfossil Fuel Source? ☐ Yes ☐ No

Type of Nonfossil Fuel Source: ☐ Solar ☐ Wind ☐ Hydro
☐ Biomass ☐ Geothermal

PV Array DC Rated Output: _____ kW PV Array AC Rated Output: _____ kW

Maximum Site Load without Generator Capability: _____ kW Maximum Generator Capability: _____ kW

Minimum Site Load without Generation: _____ kW Maximum Export: _____ kW

Annual Energy Production of Generating Facility: _____ kWh

Annual Energy Exported through Point of Common Coupling: _____ kWh

Section 3. Generator Technical Information

Seller must not modify or add to the Generating Facility without notification and the prior written consent of the Company.

Type of Generator: ☐ Synchronous ☐ Induction ☐ Inverter-Based Generating Facility

Generator (or solar collector) Manufacturer, Model Name & Number: _____

(A copy of Generator Nameplate and Manufacturer's Specification Sheet must also be submitted)

Operating Power Factor: _____ Nameplate Rating in kW: _____

Fault Current Contribution of Generator: _____ Amps

Inverter Manufacturer, Model Name & Number (if used): _____

(A copy of Inverter Nameplate and Manufacturer's Specification Sheet must also be submitted)

Operating Power Factor: _____ Rating in kW: _____

Number of Starts Per Day: _____ Maximum Starting kVA: _____

UF Trip Setting: _____ UF Time Delay (Secs): _____

Generator Grounding Method:

☐ Effectively Grounded ☐ Resonant Grounded
☐ Low-Inductance Grounded ☐ High-Resistance Grounded
☐ Low-Resistance Grounded ☐ Ungrounded

Generator Characteristic Data (for rotating machines):

(Not needed if Generator Nameplate and Manufacturer's Specification Sheet are provided)

Direct Axis Synchronous Reactance, X_d :	_____ P.U.	Negative Sequence Reactance:	_____ P.U.
Direct Axis Transient Reactance, X'_d :	_____ P.U.	Zero Sequence Reactance:	_____ P.U.
Direct Axis Subtransient Reactance, X''_d :	_____ P.U.	KVA Base:	_____
Inertia Constant, H:	_____ P.U.		
Excitation Response Ratio:	_____		

Direct Axis Open-Circuit Transient Time Constant, T'_{do} : _____ Seconds

Direct Axis Open-Circuit Subtransient Time Constant, T''_{do} : _____ Seconds

Section 4. Interconnecting Equipment Technical Data (to the extent owned by Seller)

Will an interposing transformer be used between the generator and the point of interconnection? ☐ Yes ☐ No

Transformer Data:

(A copy of transformer Nameplate and Manufacturer's Test Report may be substituted)

Size: _____ KVA.	Transformer Primary:	_____ Volts	<input type="checkbox"/> Delta	<input type="checkbox"/> Wye	<input type="checkbox"/> Wye Grounded
	Transformer Secondary:	_____ Volts	<input type="checkbox"/> Delta	<input type="checkbox"/> Wye	<input type="checkbox"/> Wye Grounded

Transformer Impedance: _____ % on _____ KVA Base

Transformer Fuse Data:

(Attach copy of fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves)

At ☐ Primary Voltage ☐ Secondary Voltage

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Transformer Protection (if not fuse):

Please

describe: _____

Interconnecting Circuit Breaker (if applicable):

(A copy of circuit breaker's Nameplate and Specification Sheet must also be submitted)

Manufacturer: _____ Type: _____

Continuous

Load Rating: _____ Interrupting Rating: _____ Trip Speed: _____
(Amps) (Amps) (Cycles)

Circuit Breaker Protective Relays (if applicable):

(Enclose copy of any proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____

Current Transformer Data (if applicable):

(Enclose copy of Manufacturer's Excitation & Ratio Correction Curves)

Manufacturer: _____	Type: _____	Accuracy Class: _____	Proposed Ratio Connection: _____ /5
Manufacturer: _____	Type: _____	Accuracy Class: _____	Proposed Ratio Connection: _____ /5

Generator Disconnect Switch:

A generator disconnect device (isolation device) must be installed with features as described in the FIT Interconnection Standards And Technical Requirements.

Manufacturer: _____ Type: _____ Catalog No.: _____ Rated Volts: _____ Rated Amps: _____

SHEET NO. XX
Effective

Single or 3 Phase: _____ Mounting Location: _____

Section 5. General Technical Information

Enclose copy of site single-line diagram showing configuration and interconnection of all equipment, current and potential circuits and protection and control schemes.

Is Single-Line Diagram Enclosed? Yes ☐

Enclose copy of site relay list and trip scheme, which shall include all protection, synchronizing and auxiliary relays that are required to operate the Facility in a safe and reliable manner.

Are Relay List and Trip Scheme Enclosed? Yes ☐

Enclose copy of site three-line diagram (if the Facility's capacity is greater than or equal to 30 kW) showing potential transformer and current transformer ratios, and details of the Facility's configuration, including relays, meters, and test switches.

Is Three-Line Diagram Enclosed? Yes ☐

Section 6. Installation Details

Installing Electrical Contractor: _____ Firm: _____ License No.: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: Area Code: _____ Number: _____

Installation Date: _____ Interconnection Date: _____

Supply certification that the generating system has been installed and inspected in compliance with the local Building/Electrical code of the County of _____

Permit Number: _____

Signed
(Inspector): _____ Date: _____

In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)

Section 7. Generator/Equipment Certification

Generating systems that utilize inverter technology must be compliant with *Institute of Electrical and Electronics Engineers IEEE Std 1547* and *Underwriters Laboratories UL 1741* in effect at the time this Interconnection Agreement is executed. Generating systems that use a rotating machine must be compliant with applicable National Electrical Code, Underwriters Laboratories, and Institute of Electrical and Electronics Engineers standards and rules and orders of the Hawaii Public Utilities Commission in effect at the time this Interconnection Agreement is executed. **By signing below, the Applicant certifies that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance.**

Signed (Seller): _____ Date: _____

Section 8. Insurance

Insurance Carrier: _____

APPENDIX B-2

COMPANY-OWNED INTERCONNECTION FACILITIES

1. Description of Company-Owned Interconnection Facilities

(a) The Company will purchase, construct, own, operate and maintain all Company- Owned Interconnection Facilities required to interconnect the Company System with the Facility at ____ volts, up to the Point of Interconnection.

(b) The Company-Owned Interconnection Facilities, for which the Seller agrees to pay, include:

[COMPANY TO SPECIFY THE INTERCONNECTION FACILITIES. IF NO INTERCONNECTION FACILITIES, STATE "NONE".]

(c) All interconnection facilities not expressly identified in Appendix B-1 (Description of Facility) to this Agreement as owned by Seller are Company-Owned Interconnection Facilities.

2. Seller Payment to Company for Company-Owned Interconnection Facilities, Review of Facility, and Review of Verification Testing

(a) The Seller shall pay to the Company the total estimated interconnection cost to be incurred by the Company ("Total Estimated Interconnection Cost") for the Company-Owned Interconnection Facilities described in Section 1(b) above, which is comprised of (i) the estimated cost of the Company-Owned Interconnection Facilities, (ii) the estimated engineering costs associated with (A) developing the Company-Owned Interconnection Facilities and (B) reviewing and specifying those portions of the Facility which allow interconnected operations as such are described in Appendix B-1 (Description of Facility) and (iii) reviewing the verification testing. The following summarizes the Total Estimated Interconnection Cost:

<u>Description</u>	<u>Estimated Cost (\$)</u>
--------------------	--------------------------------

**[COMPANY TO SPECIFY THE ESTIMATED INTERCONNECTION COST.
IF NO COST, STATE "NONE".]**

Total Estimated Interconnection Cost \$

(b) The Total Estimated Interconnection Cost, which, except as otherwise provided herein, is non-refundable, shall be paid by the Seller fourteen (14) Days after receipt of an invoice from the Company, which shall be provided not less than thirty (30) Days prior to start of procurement of the Company-Owned Interconnection Facilities.

(c) Within thirty (30) Days of receipt of an invoice, which shall be provided within fourteen (14) Days of the final accounting, which shall take place within sixty (60) Days of completion of construction of the Company-Owned Interconnection Facilities, the Seller shall remit to the Company the difference between the Total Estimated Interconnection Cost paid to date and the total actual interconnection cost (Total Actual Interconnection Cost). The Total Actual Interconnection Cost is comprised of (i) the total costs of the Company-Owned Interconnection Facilities, and (ii) the total engineering costs associated with (A) developing the Company-Owned Interconnection Facilities and (B) reviewing and specifying those portions of the Facility which allow interconnected operations, and (iii) reviewing the verification testing. If in fact the Total Actual Interconnection Cost is less than the payments received by the Company as the Total Estimated Interconnection Cost, the Company shall repay the difference to the Seller within thirty (30) Days of the final accounting.

(d) If the Interconnection Agreement is terminated prior to the Seller's payment for the Total Actual Interconnection Cost (or the portion of this cost which has been incurred) or prior to the Company's repayment of the over-collected amount of the Total Estimated Interconnection Cost (or the portion of this cost which has been paid), such payments shall be made by the Seller or Company, as appropriate. If payment is due to the Company, the Seller shall pay within thirty (30) Days of receipt of an invoice, which shall be provided within fourteen (14) Days of the final accounting, which shall take place within sixty (60) Days of the date the Interconnection Agreement is terminated. If payment is due to the Seller, the Company shall pay within thirty (30) Days of the final accounting.

(e) All Company-Owned Interconnection Facilities shall be the property of the Company.

3. Operation, Maintenance and Testing Costs

The Company will bill the Seller monthly and the Seller will, within 30 Days after the billing date, reimburse the Company for any costs incurred in operating, maintaining or testing the Company-Owned Interconnection Facilities, to the extent such costs are not included in or are not appropriate for inclusion in the Company's base rates. The Company's costs will be determined on the basis of outside service costs, direct labor costs, material costs, transportation costs, applicable overheads at time incurred and applicable taxes. Applicable overheads will include such costs as vacation, payroll taxes, non-productive wages, supervision, tools expense, employee benefits, engineering administration, corporate administration, and materials handling. Applicable taxes will include the Public Service Company Tax, and Public Utility Fee.

4. Seller Use of Company-Owned Interconnection Facilities Upon Termination

Notwithstanding that all Company-Owned Interconnection Facilities are the property of the Company, upon termination of the Interconnection Agreement, the Company shall identify any equipment paid for by the Seller that can feasibly be returned to the Seller. If Seller desires such equipment, Seller shall pay for the removal of the equipment and the restoration of the Company System to the Company's satisfaction.

APPENDIX C

PURCHASE OF ELECTRIC ENERGY BY COMPANY

1. Rate for Purchase of Electric Energy. Subject to the provisions of this Agreement, the Company shall accept and pay for electric energy generated by the Facility and delivered by Seller to the Company at the rate set forth in Table C-1 below beginning from the Commercial Operation Date.

[Table C-1 placeholder]

<u>Year</u>	<u>Rate</u>
Years 1-20	\$0.xxxx/kWh

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DEPARTMENT OF THE ATTORNEY GENERAL
425 Queen Street
Honolulu, Hawaii 96813
Counsel for DBEDT

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CARRIE K.S. OKINAGA, ESQ.
GORDON D. NELSON, ESQ.
DEPARTMENT OF THE CORPORATION COUNSEL
CITY AND COUNTY OF HONOLULU
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Honolulu, Hawaii 96813

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MICHAEL J. UDOVIC, ESQ.
DEPARTMENT OF THE CORPORATION COUNSEL
COUNTY OF HAWAII
101 Aupuni Street, Suite 325
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MS. KAT BRADY
LIFE OF THE LAND
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